

VILLAGE OF DOWNERS GROVE
REPORT FOR THE VILLAGE COUNCIL MEETING
May 6, 2014 Agenda

SUBJECT:	TYPE:	SUBMITTED BY:
Firefighter Turnout Gear Purchase	Resolution Ordinance ✓ Motion Discussion Only	James Jackson, Fire Chief

SYNOPSIS

A motion is requested to authorize the purchase of firefighter turnout gear from Air One, Inc. of Elgin, Illinois in an amount not to exceed \$42,000.

STRATEGIC PLAN ALIGNMENT

The Strategic Goals for 2011-2018 identified *Exceptional Municipal Services*.

FISCAL IMPACT

The adopted FY14 budget includes \$42,000 in the General Fund for the replacement of worn out turnout gear and the outfitting of new members.

RECOMMENDATION

Approval on the May 6, 2014 consent agenda.

BACKGROUND

The Village provides one set of protective firefighting gear (coat, pants and other required accessories) for each firefighter. This gear, which is the protective clothing worn into a firefighting operation, has a limited useful life due to normal wear and tear. In November 2012 the Village entered into a three-year agreement with Air One Equipment for the purchase of this gear and purchased 14 sets in 2012 and 15 sets in 2013 to replace existing gear and outfit new employees. The agreement includes price increases of approximately 3.5% each year through 2015. The Fire Department will replace another 15 sets of turnout gear this year.

ATTACHMENTS

Contract

RESOLUTION NO. 2012-81

**A RESOLUTION AUTHORIZING EXECUTION OF AN
AGREEMENT BETWEEN THE VILLAGE OF DOWNERS GROVE
AND AIR ONE EQUIPMENT, INC.**

BE IT RESOLVED by the Village Council of the Village of Downers Grove, DuPage County, Illinois, as follows:

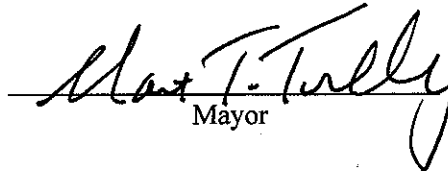
1. That the form and substance of a certain Agreement (the "Agreement"), between the Village of Downers Grove (the "Village") and Air One Equipment, Inc. (the "Supplier"), for firefighter turnout gear, as set forth in the form of the Agreement submitted to this meeting with the recommendation of the Village Manager, is hereby approved.

2. That the Village Manager and Village Clerk are hereby respectively authorized and directed for and on behalf of the Village to execute, attest, seal and deliver the Agreement, substantially in the form approved in the foregoing paragraph of this Resolution, together with such changes as the Manager shall deem necessary.

3. That the proper officials, agents and employees of the Village are hereby authorized and directed to take such further action as they may deem necessary or appropriate to perform all obligations and commitments of the Village in accordance with the provisions of the Agreement.

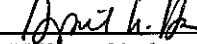
4. That all resolutions or parts of resolutions in conflict with the provisions of this Resolution are hereby repealed.

5. That this Resolution shall be in full force and effect from and after its passage as provided by law.



Mayor

Passed: November 6, 2012

Attest: 

Village Clerk

AGREEMENT

This Agreement is made this 17 day of SEPTEMBER, 2012 by and between Air One Equipment, Inc. ("Supplier") and the Village of Downers Grove, Illinois, an Illinois municipal corporation with offices at 801 Burlington Avenue, Downers Grove, Illinois 60515, ("Village").

WHEREAS, the Village wishes to purchase firefighter turnout gear from Supplier; and

WHEREAS, Supplier is willing to provide this gear for compensation and in accordance with the terms and conditions described in this Agreement.

NOW, THEREFORE, in consideration of the mutual benefits that will result to the parties in carrying out the terms of this Agreement, it is agreed as follows:

I. Scope of Services

Supplier shall provide firefighter turnout gear (pants, coats and boots) to the Village in accordance with the Detail Specifications for said gear attached hereto and incorporated herein by reference as Exhibit B.

II. Term of Agreement

The term of this Agreement shall be from the date of execution and ending on April 30, 2015.

III. Compensation

A. Basic Fees:

Fees for the gear shall be assessed on a per item basis as set forth in Supplier's proposal attached hereto and incorporated herein as Exhibit C.

B. Supplier Invoices:

Supplier shall prepare invoices that contain a reference number, the billing period, the items purchased and amounts therefor, amounts billed to date, and amounts received to date.

C. Prompt Payment Act:

The Village will comply with the Local Government Prompt Payment Act, 50 ILCS 505/1 et seq., in that any bill approved for payment must be paid or the payment issued to Supplier within 60 days of receipt of a proper bill or invoice. If payment is not issued to Supplier within this 60 day period, an interest penalty of 1.0% of any amount approved and unpaid shall be added for each month or fraction thereof after the end of this 60 day period, until final payment is made.

The Village shall review in a timely manner each bill or invoice after its receipt. If the Village determines that the bill or invoice contains a defect making it unable to process the payment request, the Village shall notify Supplier requesting payment as soon as possible after discovering the defect pursuant to rules promulgated under 50 ILCS 505/1 et seq. The notice shall identify the defect and any additional information necessary to correct the defect.

IV. General Terms and Conditions

A. Relationship Between Supplier and the Village

The relationship between the Village and Supplier is that of a buyer and seller of goods and it is understood that the parties have not entered into any joint venture or partnership with the other.

B. Equal Employment Opportunity

In the event of Supplier's non-compliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Rules and Regulations of the Illinois Department of Human Rights ("Department"), Supplier may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be canceled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation. During the performance of this Agreement, Supplier agrees as follows:

1. That it will not discriminate against any employee or applicant for employment because of race, color religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
2. That, if it hires additional employees in order to perform this Agreement or any portion thereof, it will determine the availability (in accordance with the Department's Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
3. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.
4. That it will send to each labor organization or representative of workers with which

it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the consultant's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the consultant in its efforts to comply with such Act and Rules and Regulations, the consultant will promptly so notify the Department and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

5. That it will submit reports as required by the Department's Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.
6. That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.
7. That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that such provisions will be binding upon such subconsultant. In the same manner as with other provisions of this Agreement, the consultant will be liable for compliance with applicable provisions of this clause by such subconsultants; and further it will promptly notify the contracting agency and the Department in the event any subconsultant fails or refuses to comply therewith. In addition, the Consultant will not utilize any subconsultant declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivision or municipal corporations.

C. Sexual Harassment

Supplier, as a party to a public contract, has a project specific written sexual harassment policy amended so that it:

1. Notes the illegality of sexual harassment;
2. Sets forth the State law definition of sexual harassment;
3. Describes sexual harassment utilizing examples;
4. Describes Supplier's internal complaint process including penalties;
5. Describes the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission and how to contact these entities, and;
6. Describes the protection against retaliation afforded under the Illinois Human Rights Act.

D. Drug Free Work Place

Supplier, as party to a public contract, certifies and agrees that it will provide a drug free workplace by:

1. Publishing a statement: (1) Notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance, including cannabis, is prohibited in Supplier's workplace. (2) Specifying the actions that will be taken against employees for violations of such prohibition. (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will: abide by the terms of the statement; and notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.
2. Establishing a drug free awareness program to inform employees about: (1) the dangers of drug abuse in the workplace; (2) Supplier's policy of maintaining a drug free workplace; (3) any available drug counseling, rehabilitation, and employee assistance programs; (4) the penalties that may be imposed upon employees for drug violations.
3. Providing a copy of the statement required by subparagraph (1) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
4. Notifying the contracting or granting agency within ten (10) days after receiving notice of a criminal drug statute conviction from an employee or otherwise receiving actual notice of such conviction.
5. Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by, any employee who is so convicted as required by Section 5 of the Drug Free Workplace Act.
6. Assisting employees in selecting a course of action in the event drug counseling, treatment, and rehabilitation is required and indicating that a trained referral team is in place.
7. Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

E. Non-Discrimination

Supplier, its employees and subconsultants, agree not to commit unlawful discrimination and agree to comply with applicable provisions of the Illinois Human Rights Act, the Public Works Employment Discrimination Act, the U.S. Civil Rights Act and Section 504 of the Federal Rehabilitation Act, and rules applicable to each. The equal opportunity clause of the Department of Human Rights rules is specifically incorporated herein.

The Americans with Disabilities Act (42 U.S.C. 12101) and the regulations

thereunder (28 CFR 35.130)(ADA) prohibit discrimination against persons with disabilities by the State, whether directly or through contractual arrangements, in the provision of any aid, benefit or service. As a condition of receiving this Agreement, the undersigned vendor certifies that services, programs and activities provided under this Agreement are and will continue to be in compliance with the ADA.

F. Campaign Disclosure Certificate

Supplier shall comply with the Campaign Disclosure Certificate attached hereto and incorporated herein by reference as Exhibit A.

G. Patriot Act Compliance

Supplier represents and warrants to the Village that neither it nor any of its principals, shareholders, members, partners, or affiliates, as applicable, is a person or entity named as a Specially Designated National and Blocked Person (as defined in Presidential Executive Order 13224) and that it is not acting, directly or indirectly, for or on behalf of a Specially Designated National and Blocked Person. Supplier further represents and warrants to the Village that Supplier and its principals, shareholders, members, partners, or affiliates, as applicable are not, directly or indirectly, engaged in, and are not facilitating, the transactions contemplated by this Agreement on behalf of any person or entity named as a Specially Designated National and Blocked Person. Supplier hereby agrees to defend, indemnify and hold harmless the Village, and its elected or appointed officers, employees, agents, representatives, engineers and attorneys, from and against any and all claims, damages, losses, risks, liabilities and expenses(including reasonable attorney's fees and costs) arising from or related to any breach of the foregoing representations and warranties.

H. Cooperation with FOIA Compliance

Supplier acknowledges that the Freedom of Information Act may apply to public records in possession of Supplier. Supplier shall cooperate with the Village in its efforts to comply with the Freedom of Information Act. 5 ILCS 140/1 et.seq.

I. Copyright or Patent Infringement

Supplier agrees to indemnify, defend, and hold harmless the Village against any suit, claim, or proceeding brought against the Village for alleged use of any equipment, systems, services or goods provided by Supplier that constitutes a misuse of any proprietary or trade secret information or an infringement of any patent or copyright.

V. Insurance and Indemnification of the Village

A. Insurance

Supplier shall procure, maintain and pay for such insurance as will protect against claims for bodily injury or death, or for damage to property, including loss of use, which may

arise out of operations by Supplier. Such insurance shall not be less than the greater of coverages and limits of liability specified below or any coverages and limits of liability specified in the Contract or coverages and limits required by law unless otherwise agreed to by the Village.

Workers Compensation	\$500,000	Statutory
Employers Liability	\$1,000,000	Each Accident
	\$1,000,000	Disease Policy Limit
	\$1,000,000	Disease Each Employee
Comprehensive General Liability	\$2,000,000	Each Occurrence
	\$2,000,000	Aggregate
		<i>(Applicable on a Per Project Basis)</i>
Commercial Automobile Liability	\$1,000,000	Each Accident
Professional Errors & Omissions	\$2,000,000	Each Claim
	\$2,000,000	Annual Aggregate
Umbrella Liability	\$ 5,000,000	

Comprehensive General Liability Insurance required under this paragraph shall be written on an occurrence form and shall include coverage for Products/Completed Operations, Personal Injury with Employment Exclusion (if any) deleted, Blanket XCU and Blanket Contractual Liability insurance applicable to defense and indemnity obligations and other contractual indemnity assumed under the Contract Documents. The limit must be on a "Per Project Basis".

Commercial Automobile Liability Insurance required under this paragraph shall include coverage for all owned, hired and non-owned automobiles.

Workers Compensation coverage shall include a waiver of subrogation against the Village.

Comprehensive General Liability, Employers Liability and Commercial Automobile Liability Insurance may be arranged under single policies for full minimum limits required, or by a combination of underlying policies with the balance provided by Umbrella and/or Excess Liability policies.

Supplier shall have their respective Comprehensive General Liability (including products/completed operations coverage), Employers Liability, Commercial Automobile Liability, and Umbrella/Excess Liability policies endorsed to add the "Village of

Downers, its officers, officials, employees and volunteers" as "additional insureds" with respect to liability arising out of operations performed; claims for bodily injury or death brought against the Village by any Contractor or Subcontractor employees, or the employees of Subcontractor's subcontractors of any tier, however caused, related to the performance of operations under the Contract Documents. Such insurance afforded to the Village shall be endorsed to provide that the insurance provided under each policy shall be *Primary and Non-Contributory*.

Supplier shall maintain in effect all insurance coverages required by the Contract at its sole expense and with insurance carriers licensed to do business in the State of Illinois and having a current A. M. Best rating of no less than A- VIII. In the event that Supplier fails to procure or maintain any insurance required by the Contract, the Village may, at its option, purchase such coverage and deduct the cost thereof from any monies due to Supplier, or withhold funds in an amount sufficient to protect the Village, or terminate this Contract pursuant to its terms.

All insurance policies shall contain a provision that coverages and limits afforded hereunder shall not be canceled, materially changed, non-renewed or restrictive modifications added, without thirty (30) days prior written notice to the Village. Renewal certificates shall be provided to the Village not less than five (5) days prior to the expiration date of any of the required policies. All Certificates of Insurance shall be in a form acceptable to the Village and shall provide satisfactory evidence of compliance with all insurance requirements. The Village shall not be obligated to review such certificates or other evidence of insurance, or to advise Supplier of any deficiencies in such documents, and receipt thereof shall not relieve Supplier from, nor be deemed a waiver of the right to enforce the terms of the obligations hereunder. The Village shall have the right to examine any policy required and evidenced on the Certificate of Insurance.

If the Work under the Contract Documents includes design, consultation, or any other professional services, Contractor or the Subcontractor shall procure, maintain, and pay for Professional Errors and Omissions insurance with limits of not less than \$2,000,000 per claim and \$2,000,000 annual aggregate. If such insurance is written on a claim made basis, the retrospective date shall be prior to the start of the Work under the Contract Documents. Contractor and all Subcontractors agree to maintain such coverage for three (3) years after final acceptance of the Project by the Village or such longer period as the Contract Documents may require. Renewal policies during this period shall maintain the same retroactive date.

Any deductibles or self-insured retentions shall be the sole responsibility of the Insured. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Village, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

B. Indemnification

Supplier will indemnify and hold harmless the Village and its officers, employees and agents from any and all liability, losses or damages the Village may suffer as a result of claims, demands, suits, actions or proceedings of any kind or nature in any way resulting from or arising out of negligent action on the part of Supplier under this Agreement. This indemnification does not apply to liability caused by the Village's own negligence.

VI. Miscellaneous Provisions**A. Termination**

In the event of Supplier's nonperformance, breach of the terms of the Agreement, or for any other reason, including that sufficient funds to complete this Agreement are not appropriated by the Village, the Agreement may be canceled, in whole or in part, upon the Village's written notice to Supplier. The Village will pay Supplier's costs actually incurred as of the date of receipt of notice of termination.

B. Governing Law

This Agreement will be governed by and construed in accordance with the laws of the State of Illinois. Venue is proper only in the County of DuPage.

C. Successors and Assigns

The terms of this Agreement will be binding upon and inure to the benefit of the parties and their respective successors and assigns; provided, however, that neither party will assign this Agreement in whole or in part without the prior written approval of the other.

D. Waiver of Contract Breach

The waiver by one party of any breach of this Agreement or the failure of one party to enforce at any time, or for any period of time, any of the provisions hereof will be limited to the particular instance and will not operate or be deemed to waive any future breaches of this Agreement and will not be construed to be a waiver of any provision except for the particular instance.

E. Amendment

This Agreement will not be subject to amendment unless made in writing and signed by all parties.

F. Severability of Invalid Provisions

If any provisions of this Agreement are held to contravene or be invalid under the laws of any state, country or jurisdiction, contravention will not invalidate the entire Agreement,

but it will be construed as if not containing the invalid provision and the rights or obligations of the parties will be construed and enforced accordingly.

G. Assignment

Supplier will not assign or subcontract any portion of this Agreement, unless the Village agrees to the assignment or subcontract in writing. Any assignment will not relieve Supplier from its obligations or change the terms of this Agreement.

H. Notice

Any notice will be in writing and will be deemed to be effectively served when deposited in the mail with sufficient first class postage affixed, and addressed to the party at the party's place of business. Notices shall be addressed to designated representatives of both parties as follows:

Village Manager
Village of Downers Grove
801 Burlington Ave.
Downers Grove, IL 60515

Air One Equipment, Inc.
360 Production Drive
South Elgin, IL 60177

I. Village Ordinances

Supplier will strictly comply with all ordinances of the Village of Downers Grove and laws of the State of Illinois as they relate to this Agreement.

J. Use of Village's Name

Supplier is specifically denied the right of using in any form or medium the name of the Village for public advertising unless express permission is granted by the Village.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date indicated above.

Air One Equipment, Inc.

By: Condra M. Frey

Title: PRESIDENT

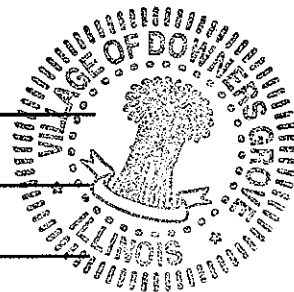
Date: 9/17/2012

Village of Downers Grove

By: [Signature]

Title: Village Manager

Date: 11/13/12



**Exhibit A
Campaign Disclosure Certificate**

The Campaign Disclosure Certificate is required pursuant to the Village of Downers Grove Council Policy on Ethical Standards and is applicable to those campaign contributions made to any member of the Village Council.

Said Campaign Disclosure Certificate requires any individual or entity bidding to disclose campaign contributions, as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4), made to current members of the Village Council within the five (5) year period preceding the date of the bid or proposal release.

By signing this Agreement, Supplier agrees to refrain from making any campaign contributions as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4) to any Village Council member and any challengers seeking to serve as a member of the Downers Grove Village Council.

Under penalty of perjury, I declare:

Supplier has not contributed to any elected Village position within the last five (5) years.

Sandra M. Frey
Signature

SANDRA M. FREY
Print Name

Supplier has contributed a campaign contribution to a current member of the Village Council within the last five (5) years.

Print the following information:

Name of Contributor: _____
(company or individual)

To whom contribution was made: _____

Year contribution made: _____ Amount: \$ _____

Signature

Print Name

Exhibit B**DETAILED SPECIFICATIONS****Firefighting Turnout Gear Ensembles**

The items shall meet all requirements of NFPA-1971 Standard on Protective Ensemble for Structural Firefighting - 2007 edition.

Coats and Pants

Coats and pants shall be procured from the same manufacturer to prevent interface problems.

Certification

The manufacturer must certify that the garments meet or exceed all requirements of NFPA 1971. The manufacturer must also list and label this product with Underwriters Laboratories Inc. (UL) or Safety Equipment Institute (SEI), as the third party certification organization prescribed in NFPA 1971. All certification testing and test preconditioning must have been performed by an ISO 17025-certified laboratory. UL, SEI or a UL Authorized Client Test Data Program laboratory will fulfill this requirement.

Certification shall include, by definition, the scope of bloodborne pathogen protection as follows: When used with BPR gloves, BPR boots, and a BPR helmet (with BPR face shield and ear covers), the garments shall provide head-to-toe bloodborne pathogen resistance protection, including the interface areas, as defined by the NFPA 1971 Viral Penetration Resistance Test using the Phi-X174 bacteriophage, in conjunction with the NFPA 1971 Whole Garment Liquid Penetration Test.

Barrier layer material(s) and barrier layer seams shall meet requirements of the NFPA 1971 Viral Penetration Resistance Test.

Manufacturer must provide, on request, third party certification of the required interface bloodborne pathogen resistant capability.

The manufacturer shall be registered to ISO 9001, *Quality Management Systems – Requirements, 2000*.

Warranty

The manufacturer must provide a lifetime warranty against defects in materials and workmanship.

Product Country of Origin

Garments must be manufactured in the United States of America or Canada by companies with their assets and incorporation within the United States of America or Canada.

Labeling Requirements

Labels shall be permanently and integrally printed onto breathable materials that meet all the requirements for labels of NFPA 1971. Garment labels shall meet all requirements of NFPA 1971 Flame Resistance Test One (for vertical flame resistance of cloth). The garment shall be clearly labeled to fully identify the material content of all three layers: outer shell, moisture barrier and thermal liner. In addition, each separable layer of garment shall be labeled with the FEMSA-style DANGER label in an obvious location.

Delivery

Delivery of all gear shall take place within 30 days of order placement.

Care Instructions

The manufacturer shall provide a user information guide for the garments, which complies with user information requirements of NFPA 1971. Topics shall include, but not necessarily be limited to: pre-use information, preparation for use, inspection frequency and details, don/doff, use consistent with NFPA 1500, maintenance and cleaning, and retirement and disposal criteria and considerations.

This document shall be packaged with each garment along with a specification summary sheet describing garment custom options, sizing and production details. This written information shall be in complete compliance with NFPA 1971 requirements, and shall reference same.

Traceability Program

The manufacturer shall have in place a computer maintained traceability program that provides for the assignment of a production control number to each garment. The traceability program must be capable of tracing the garment through production, from the bolts of cloth used in all three layers of the garment composite construction, to the assignment of the garment to the individual firefighter. This production control number shall be visibly located on the garment label and on other protected areas of garment.

Sizing

To ensure a perfect fit, sizing shall be based on actual measurements taken of the firefighter by a trained measurement specialist, or sizing try-ons, or both. Sizing measurements shall be taken according to a schedule and location(s) mutually agreed between the manufacturer and the department.

Garments shall be available in custom sizing as follows: coat chest in 2-inch (5.1 cm) increments, coat sleeve in 0.5-inch (1.3 cm) increments, coat back length in 1-

inch (2.5 cm) increments, pant waist in 2-inch (5.1 cm) increments and pant inseam in 1-inch (2.5 cm) increments. A full range of women's sizing, on women's patterns, must also be available. Each sleeve and inseam length shall provide 100% gradation from shoulder to wrist, and from hip to ankle, to provide proper fit for individual arm and leg lengths. Pattern tailoring to custom-fit neck, bicep, hip/seat and thigh circumferences must also be provided, when needed, at no additional charge. Neither Small-Medium-Large-Extra Large sizing nor women's garments cut to men's patterning are considered acceptable, since proper fit facilitates mobility and minimizes stress.

Flammability of Constituent Materials

Labels, bindings, hang-up loops and production labels shall be tested for flame resistance and shall comply with the requirements of NFPA 1971 Flame Resistance Test One (for vertical flammability of cloth).

Self Binding

Liner and moisture barrier shall be stitched together and turned, then topstitched, to create a self binding. The extra bulk of separate binding material is specifically prohibited.

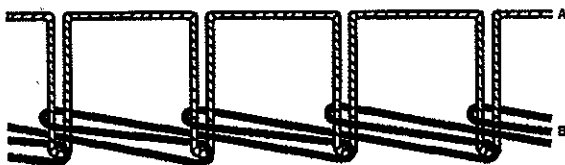
Thread

All thread used in structural seams shall be Nomex of minimum Tex size T-70. Light colored garments and trim areas shall feature yellow thread. Black and dark garments shall feature black thread.

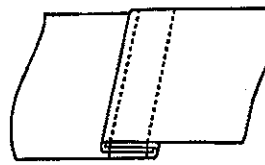
Major Seams

Except for the collar Major A seam, which is single-needle lockstitched three times, all Major A & B seams (as defined by NFPA 1971) shall be double stitched, double feld throughout all three layers (outer shell, moisture barrier and thermal liner shall be made with Nomex thread, Tex size T-90. All moisture barrier seams shall be tape-sealed to meet all requirements of the NFPA 1971 Liquid Penetration Resistance Test.

Detailed stitch and seam type requirements are shown below.



Stitch Type 401



Seam Type LSe-2 (Modified)

Stitch Type 401

Double lockstitch, as defined by ASTM D 6193-97

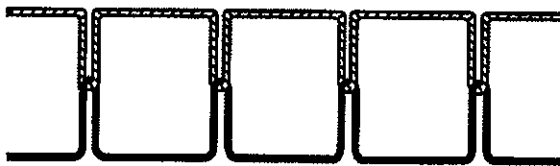
Modified Seam Type LSc-2

Double feld seam, modified only to ensure that both stitch lines penetrate all layers of cloth at joining, otherwise as defined by ASTM D 6193-97

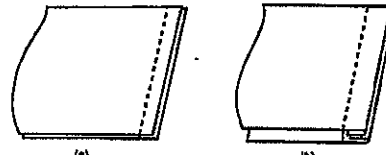
Minor Seams

Most Minor seams, such as storm shields and mated hems, shall also be stitched with the specified Nomex thread.

Detailed stitch and seam type requirements are shown below.



Stitch Type 301



Seam Type SSae-2

Stitch Type 301

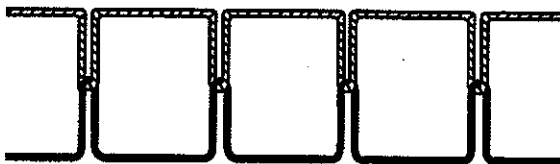
Lockstitch as defined by ASTM D 6193-97

Seam Type SSae-2

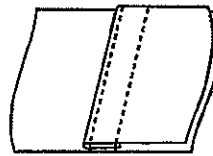
As defined by ASTM D 6193-97, shown (a) before and (b) after required turning

Pockets

Flat garment pockets shall be stitched with the specified Nomex thread. Detailed stitch and seam type requirements are shown below.



Stitch Type 301



Seam Type LSd-2

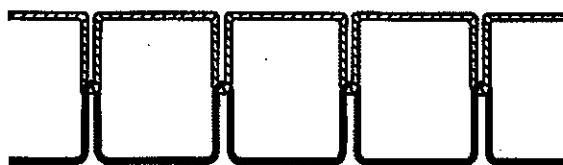
Stitch Type 301

Lockstitch as defined by ASTM D 6193-97

Seam Type LSd-2

As defined by ASTM D 6193-97

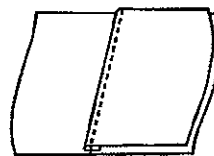
3-Dimensional pocketing shall feature these same construction details, but the reinforced single stitch Seam Type LSd-1 may be substituted for LSd-2. Detailed seam type requirements are shown below.



Stitch Type 301

Stitch Type 301

Lockstitch as defined by ASTM D 6193-97



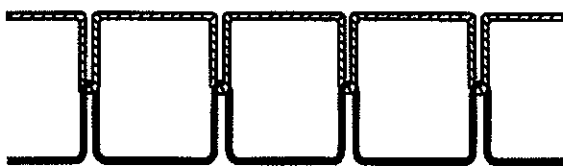
Seam Type LSd-1

Seam Type LSd-1

As defined by ASTM D 6193-97

Trim and Danger Labels

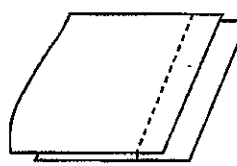
Trim and DANGER labels shall be stitched with the specified Nomex thread. Detailed stitch and seam type requirements are shown below.



Stitch Type 301

Stitch Type 301

Lockstitch as defined by ASTM D 6193-97



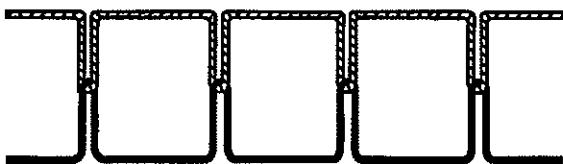
Seam Type SSbd-1

Seam Type SSbd-1

As defined by ASTM D 6193-97

Single Layer Hemming and Finishing

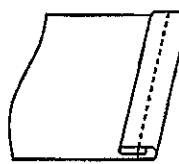
Single layer hemming and finishing shall be stitched with the specified Nomex thread. Detailed stitch and seam type requirements are shown below.



Stitch Type 301

Stitch Type 301

Lockstitch as defined by ASTM D 6193-97



Stitch Type EFb-1

Seam Type EFb-1

As defined by ASTM D 6193-97

Pockets

If exterior pockets are specified in either the COAT CUSTOM OPTIONS TO BE PROVIDED section or in the PANT CUSTOM OPTIONS TO BE PROVIDED section, the following requirements shall apply to all such custom option-specified exterior pockets:

All pockets and flaps shall be reinforced at the top corners with bar tack stitching.

All pockets shall be reinforced with an extra layer of NFPA-certified outer shell, moisture barrier, or other NFPA-certified reinforcement material for extra durability. The exact location of the reinforcements shall be identified in the custom options section(s).

All pockets shall have a means to drain water and shall have a means of closure.

All pocket closures shall be made either with hook and loop fastener tape a minimum of 1.5 inches (3.8 cm) wide, with a flap, or with snaps. The specific placement of the closure system shall be declared at the time of order.

Tailored Grading of Garment Linings

Wherever garment linings are specified, including but not limited to thermal linings and moisture barriers, each such lining layer shall be tailor-graded to fit within the overall garment composite of all layers without causing bunching or binding when the garment is worn.

Points of Stress

All points of stress shall be reinforced with sturdy bartacks. Rivets are not acceptable because of their potential for rust and electrical or heat conduction.

High Temperature NFPA 1971 Certified Material Reinforcements

Reinforcements shall be provided at cuffs and pockets and shall meet the requirements of NFPA 1971.

For cuff reinforcements only: Manufacturer shall provide cuff reinforcements made of outer shell material at no additional cost. If the purchaser specifies reinforcements made of materials other than outer shell material, the manufacturer shall identify the additional cost for the specified material.

For pocket reinforcements only: Any NFPA 1971-certified material may be used in the reinforcement of the pocket. If the purchaser requests specific NFPA 1971-certified materials for pocket reinforcements, the manufacturer shall identify the additional cost for the specified material.

Asset Tracking Services

The manufacturer shall provide a Windows-compatible software program for the tracking of care, cleaning and maintenance of the department's PPE.

This tracking program shall meet or exceed all record-keeping requirements of standard NFPA 1851, *Standard on Selection, Care, and Maintenance of Structural Fire Fighting Protective Ensembles*, 2001 Edition.

Labels on each separable part of the garment shall include a standard style interleaved 2 of 5 barcode containing (at a minimum) an individualized serial

number for asset tracking purposes.

The manufacturer must provide onsite or internet training to department personnel who are involved with the daily use of this tracking program.

Repairs and Alteration Support

The manufacturer shall furnish, free of charge, reasonable quantities of NFPA 1971-certified thread, materials and other supplies to allow the department to manage its own ongoing internal maintenance efforts. Also, the manufacturer shall provide on call at no charge, during normal business hours, a liaison for the repair department to assist the Fire Department on a telephone consultation basis, on all maintenance or repair questions that might arise. Additionally, the manufacturer shall agree to expedite, on its own cost-only basis, all repairs that must be performed at the manufacturer's plant, rather than in department, over the life of the contract.

Preclusion of PVC Foam or Similar Foam

This specification precludes all use of PVC foam or foams of any type, as a component of the PPE garments, and such material may not be used anywhere in the PPE garment composite. Any exception taken, or any non-compliance with this section, will be grounds for immediate termination of the contract.

Breathability Requirement

Excluding where required by NFPA standard, necessary for functionality, or specifically called out in the custom option sections, all materials used in the construction of the garments shall be breathable and all moisture barrier material must be as specified in the following materials section, or must be Crosstech.

The breathability requirement includes but is not limited to: collar, chinstrap, storm shield, fly, waterwells, front coat facings, labels, and reinforcement cushioning where applicable.

Areas where non-breathability is allowed (absent Custom Option specifications): trim, hook and loop fastening, hardware or hardware backing, and external pocketing.

Conductive and Compressive Heat Resistance (CCHR)

Using breathable materials as outlined in the section titled Breathable Materials, there shall be a minimum area of 4" x 4" (10.2 cm x 10.2 cm) at the shoulders and elbows that provide a minimum of 25 CCHR at 2 psi, and a minimum 6" x 6" (15.2 cm x 15.2 cm) area at the knees that provide 25 CCHR at 8 psi. All three-compression areas shall be constructed of high temperature fiber based materials and sewn to the thermal liner on the inside of the liner toward the moisture barrier.

Seam Protection at Cuffs

At the coat and pant cuff Major A seams, the reflective trim shall stop just before

the folding of the full fold seam and for additional abrasion protection be covered by a sewn on, 0.75" (1.91 cm) wide black Nomex webbing material laid on top of the Major A seam and covering each end of the trim.

Applicable Documents

The following standards in their active versions on the date of execution of the contract shall form a part of this contract to the extent specified herein.

<u>STANDARD</u>	<u>TITLE</u>
ASTM D 6193-97	Standard Practice for Stitches and Seams
NFPA 1500, 2002 Edition	Standard on Fire Department Occupational Safety and Health Program
NFPA 1851, 2001 Edition	Standard on Selection, Care, and Maintenance of Structural Fire Fighting Protective Ensembles
NFPA 1971, 2007 Edition	Standard on Protective Ensemble for Structural Fire Fighting

COATS

Design Concept / Styling

Coat styling shall be "Tails" design. The coat shall be approximately 6 inches (15.2 cm) longer at the rear hem than at the front. **"Name Plates" or other attachable plates, patches, or other products that attach to the back rear of coat by hook and loop fastening, or by snaps or zippers are not acceptable substitutes (since these "fake" tails do not provide all layer protection and this still requires the use of bibbed pants to preclude protective gap.** The coat composite (all three layers) shall not gap when the firefighter is bending, crawling or climbing. Gapping shall be determined as defined by NFPA 1500 with both arms fully overhead and wearer bending to rear, sides and front. The actual length of coats (shorter or longer) will be determined by each individual's torso length. Coat must interface properly with standard height pants.

Patterning Concept

- Garments shall feature a tailored three-piece body, one-piece back construction throughout the outer shell, moisture barrier and thermal liner layers. One-piece garments (either all layers or some layers) will not be considered acceptable since they cannot be tailored to hard-to-fit personnel. Similarly, garments with seams in mid-back are not 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 the 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.

Patterning Requirements

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

- Degree of slope on shoulders shall be no more than 20%.
- Hydraulic Butterfly sleeve patterning with 85-degree Lift Up Release Action shall be provided to minimize coat hem rise.
- Sleeve attachment shall minimize shoulder lift and allow a full 360 degrees freedom of movement.
- Coat hem rise with overhead reach of both arms not to exceed 4-inch (10.2-cm) maximal extension on properly fitted garments.
- Shell-and-liner retraction at the cuff shall not exceed 1 inch (2.5 cm) when both arms are raised overhead. This helps eliminate wrist exposure.
- 10-inch (25.4-cm) chest over-sizing shall be provided.
- Coat sweep measurements must be consistent with the chest over-size at the hem.
- Reach when measured from cuff to cuff, with coat lying flat, and standard length sleeves extended to each side, shall be provided as detailed below.

<u>Chest Size</u>	<u>Standard Reach</u>
40 in (101.6 cm)	66 in (167.6 cm)
42 in (106.7 cm)	67 in (170.2 cm)
44 in (111.8 cm)	68 in (172.7 cm)
46 in (116.8 cm)	68 in (172.7 cm)

Drag Rescue Device

Manufacturer shall supply an NFPA required and certified Drag Rescue Device with each coat. The device shall be designed to fit each individual chest size. Each strap will be properly labeled with DANGER labels that include what chest size the Rescue Strap is designed to fit along with instructions for care and installation/removal of the Rescue Strap.

Rescue Strap shall be designed in a fashion that it functionally provides a dynamic and articulated action and to eliminate excess strapping material hanging down the back when installed between the garment's liner and outer shell.

The device shall be constructed using two components: a 1.75" (4.45 cm) Kevlar webbing grab handle; and a free-floating loop of Kevlar rope to go around each of the wearer's arms/shoulder. The grab handle shall be positioned at the rear of the upper torso and through the grab handle.

The grab loop shall extend upward and pass through a reinforced slot in the coat outer shell just below the center rear of the collar seam where it will exit the outer shell where it will be covered by an outer shell tunnel. The protruding grab loop shall then fold back down over the top of the tunnel and be stowed by Velcro with

the pile sewn for the width of the tunnel and the hook sewn on the grab loop. There shall then be an outer shell flap sewn below the collar that will fold down over the stored grab loop and held in place with Velcro to reduce the chances of snagging the grab loop by accident.

To facilitate comfort and safety the Grab Handle shall be constructed of soft and pliable Kevlar webbing meeting the following specifications:

Description	100% Kevlar Double Plain Weave - Black with Natural Kevlar Center			
Warp Yarn	1500/1000/2.75z	Kevlar	T-970F	Black
	1500/1000/2.75z Kevlar T-961 Natural			
Weft Yarn	1500/1000/2.75z Kevlar T-970F Black			
Catch cord	Tex size T-50 3-Ply/9.5z Bonded Kevlar Sewing Thread Black			
Width	1.75" (4.45 dm)			
Thickness	0.064" ± 0.010" (.163 cm ± .0254 cm)			
Tensile	5,000 lb minimum (22.24 kN)			

To facilitate comfort and safety the free-floating loop shall be constructed of soft and pliable Kevlar rope meeting the following specifications:

Description	100% Kevlar Tubular Plain Weave - Natural			
Warp Yarn	1500/1000/2.75z Kevlar T-961 Natural			
Weft Yarn	1500/1000/2.75z Kevlar T-961 Natural			
Catch cord	Tex size T-35 Crispin Kevlar thread			
Width	.038" (.097 cm)			
Thickness	0.144" ± 0.005" (.366 cm ± .013 cm)			
Tensile	3500 lb minimum (15.57 kN)			

Rescue Strap shall be sewn with Kevlar thread with a minimum Tex size T-210

Liner Attachment and Inspection Port

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, bulk and stiffness. To provide continuous moisture and pathogen protection at the front, the liner shall be positioned so it is sandwiched between the coat front facing and a breathable pathogen shield. The use of zippers or hook and loop fasteners in this area is not allowed due to their added weight, bulk and stiffness.

Liner sleeves shall be attached at the outer shell cuff by means of snaps on two (2) sets of outer shell fabric tabbing strips per cuff. These snaps shall be isolated by the tabbing material so that they will not abrade against the outer shell.

To provide continuous moisture protection and pathogen protection at the neck, the liner shall be positioned so that it is sandwiched between an outer-facing pathogen shield and an inside facing of the specified outer shell material, both folded over

and sewn in at the neck seam.

The liner system design shall not allow products of combustion or other contaminants to move into the liner interior between the moisture barrier and thermal liner. For instance, separately hemmed and bartacked liner and moisture barrier with open edge designs would not be acceptable.

Attachment shall be by means of four (4) glove straps that penetrate only the layer of the attachment facing towards the liner, so that metal contact at a wearer's neckline is completely eliminated.

The liner system shall incorporate a hook and loop fastener port at the lower right body panel to allow for field inspection of the "internal" condition of the moisture barrier membrane, seam sealing and thermal insulation layer quilt stitching.

Coat Certification Label

The coat certification label on the liner shall be integrally printed on FR Cotton Indura and lockstitched to the inside right body panel in a fashion to provide an inside liner pocket.

Coat Certification Label on Shell

The coat certification label on the shell shall be integrally printed on FR Cotton Indura and lockstitched to the shell along one side of the label at the back of coat.

Collar

The collar shall be of layered construction, at least 3 inches (7.6 cm) high, consisting of a layer of breathable moisture and pathogen barrier material and another layer of NFPA 1976-certified insulating material (no foam – see section titled Preclusion Of PVC Foam Or Similar Foam), sandwiched between an outer layer of outer shell material and an inner, facing layer of non-aluminized 7.5 oz PBI material. The design shall incorporate in its 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 shall have a sewn piece of 3-inch x 5-inch (7.6-cm x 12.7-cm) hook and loop fastener hook tape to ensure maximum adjustability when engaging chinstrap-to-collar closure. Each collar shall be graded to individual coat sizes.

Chin Strap

The chin strap shall be of layered construction identical to that of the collar configuration described in the previous paragraphs. Chin straps shall be 10 inches (25.4 cm) long across the top corners, 12 inches (30.5 cm) long across the bottom corners, and 5 inches (12.7 cm) in vertical height, measured at the center. The top edge shall incorporate extra material in the shape of a crescent to ensure that the whole garment will pass the NFPA 1971 Whole Garment Liquid Penetration Test.

The leading underside edge of the chin strap shall have a 1.5-inch-wide (3.8-cm-wide) horizontal strip of hook and loop fastener pile to ensure closure and to ensure passage of the NFPA 1971 Whole Garment Liquid Penetration Test.

Hang Up Loop

An 80-pound (36.3 kg) tear strength hang-up loop shall be provided at the interior collar seam. The loop shall be constructed of triple layers of the specified outer shell material, lockstitched to the coat. Webbing is not acceptable.

Sleeves

To prevent stove-piping, sleeves shall be individually graded by coat size and sleeve length. For maximum freedom, sleeve design shall feature extra full cut one-piece outer shell set-in sleeves with built-in bellows. To reduce the chances of possible top seam failure in that high thermal exposure area, the sleeve 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 fold and double stitched for maximum strength (that is, Major A seam requirement, as previously defined in this specification).

Inner wristlet and Waterwell with Thumb Tab

Every coat shall feature 4.5-inch (11.4-cm) long, double-layer 100% Nomex knit inner wristlets protected by a flame-resistant and moisture-resistant waterwell. The inner wristlet shall be sewn to the thermal liner sleeve end (not to the outer shell), and shall provide a thumb attachment by means of a Nomex tabbing material bar tacked at each end approximately 2 inches (5.1 cm) apart at the cuff opening. 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. This waterwell must pass the NFPA 1971 Whole Garment Liquid Penetration Test. The thermal liner/wristlet shall be bar tacked and seam sealed at the junction of the moisture barrier sleeve to waterwell seam to prevent liner pullout. This inner waterwell assembly shall be interface capable with the appropriate glove to provide wrist protection during the NFPA 1971 Whole Garment Liquid Penetration Test.

External Wristlet

Every coat shall feature a 2.5-inch (6.4 cm) long 100% Nomex knit outer wristlet, which shall be mounted to the end of each outer shell sleeve to prevent liquid and debris movement up the sleeve between the outer shell and the moisture barrier/ thermal liner assembly.

Front Closure Protective Overlap

Two-inch-wide (5.1 cm-wide) panels of breathable moisture/ pathogen barrier and specified thermal liner materials 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 shall consist of specified shell, moisture barrier and thermal liner materials.

The inside trailing edge of each 2-inch-wide (5.1-cm-wide) inner panel shall have the breathable moisture/ pathogen material wrapped around the edge by 0.5 inch (1.3 cm) to create an anti-wick guard to prevent soakthrough during the required NFPA 1971 Whole Garment Liquid Penetration Test. An additional layer of 6-inch-wide (15.2-cm-wide) breathable moisture/ pathogen barrier material shall be sewn between the 2-inch-wide (5.1 cm-wide) panels and outer shell coat body for the entire length of coat front in a fashion to prevent liquid entry during the NFPA 1971 Whole Garment Liquid Penetration Test.

Outer Shell Materials

Shall be 7.5 oz.; Nomex Duck/Plain weave; Nomex III A (93% Nomex, 5% Kevlar, 2% Carbon) – Natural OR 7.0 oz.; Kevlar/Nomex ripstop weave; 40% Nomex/60% Kevlar; EWR - Black

Thermal Lining

7.4 oz. calendared 100% spun 3.6 oz. Meta Aramid facecloth; 1 layer of 2.3 oz. E-89, and one layer 1.5 oz. E-89

Moisture Barrier

Crosstech Black on a 3.2 oz. Nomex III A facecloth

Custom Options on chief officer coats

Instructions in this custom options section that contradict earlier specifications or statements supersede those earlier specifications or statements as long as the required certifications are not compromised.

*****NFPA 2007 Edition Construction and Labeling*****

Foldover Comfort Chinstrap

Coat Cuffs

Inspection Port Liner

Liner Detachable

Liner Label Pocket

Take Up Straps 2 Postman

Nomex-Tabbed long wristlets

Articulating Rapid Rescue Strap with New Coat

New York-2 trim -Lime 2-Tone Scotchlite

Split Cuff Trim -3" 2-Tone Lime Scotchlite

Disposable Analysis Strip -Nomex Natural

Above Hem Trim Patch -Nomex Natural

RANK - avg. 9 letters

9 -3" sewn letters -lime Scotchlite

Back Patch -Nomex Natural

<D G F D > no periods

4 -3" sewn letters -lime Scotchlite

Hem Patch -Nomex Natural

FF LAST NAME or 1st INITIAL + LAST NAME - avg. 7 letters -ok to use 2" letters to fit
 7 -3" sewn letters -lime Scotchlite
 Integral Customization - right sleeve
 American Flag - Stars Toward Front
 Integral Customization - left sleeve
 Downers Grove Fire Dept. Patch
 Chicago Closure -2" Velcro/Hooks & Dees -Nomex Natural
 Comfort Nomex
 Collar-Hang-up Loop & Top Layer Collar, Chinstrap
 Black Knit Material on Chinstrap
 Dead Air Panels Extended - Coat
 X-Large Half Hi Bellows Pockets -Nomex Natural - 7" x 10" x 2"
 Handwarmers behind Bellows Pockets -Fleece
 Mic Tab -Nomex Natural - left collar -topside - 0.5" x 2.5"
 Mic Tab -Nomex Natural - right collar -top side - 0.5" x 2.5"
 Rigid Pass Device -Nomex Natural - left chest
 place 3" above radio pocket
 Large Hook on a Patch -Nomex Natural - right chest
 as close to shield as possible
 Radio Pocket -Nomex Natural - left chest - 8" x 3" x 2"
 Notch Flap -Left - left chest
 SL-90 Flashlight Clip -Nomex Natural - right chest
 Snaps at Bottom, Sides & Back
 Black Knit Material on Wristlets

Custom Options on Firefighter coats

Instructions in this custom options section that contradict earlier specifications or statements supersede those earlier specifications or statements as long as the required certifications are not compromised.

*****NFPA 2007 Edition Construction and Labeling*****

Foldover Comfort Chinstrap
 Coat Cuffs
 Inspection Port Liner
 Liner Detachable
 Liner Label Pocket
 Take Up Straps 2 Postman
 Nomex-Tabbed long wristlets
 Articulating Rapid Rescue Strap with New Coat
 New York-2 trim -Lime 2-Tone Scotchlite
 Split Cuff Trim -3" 2-Tone Lime Scotchlite
 Disposable Analysis Strip -Kevlar/Nomex OS Black
 Back Patch -Kevlar/Nomex OS Black
 <D G F D > no periods
 4 -3" sewn letters -lime Scotchlite

Hem Patch -Kevlar/Nomex OS Black
 FF LAST NAME or 1st INITIAL + LAST NAME - avg. 7 letters -ok to use 2"
 letters to fit
 7 -3" sewn letters -lime Scotchlite
 Integral Customization - right sleeve
 American Flag - Stars Toward Front
 Integral Customization - left sleeve
 Downers Grove FD Patch
 Chicago Closure -2" Velcro/Hooks & Dees -Kevlar/Nomex OS Black
 Comfort Nomex
 Collar-Hang-up Loop & Top Layer Collar, Chinstrap
 Black Knit Material on Chinstrap
 Dead Air Panels Extended - Coat
 X-Large Half Hi Bellows Pockets -Kevlar/Nomex OS Black - 7" x 10" x 2"
 Handwarmers behind Bellows Pockets -Fleece
 Mic Tab -Kevlar/Nomex OS Black - left collar -topside - 0.5" x 2.5"
 Large Hook on a Patch w/Velcro Strap -54B - right chest
 Radio Pocket -Kevlar/Nomex OS Black - left chest - 8" x 3" x 2"
 Notch Flap -Left - left chest
 Snaps at Bottom, Sides & Back
 Black Knit Material on Wristlets

PANTS

Design Concept / Styling

The 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 shall not be considered acceptable or "equal," since additional trunk wrapping traps heat and moisture, increasing heat stress buildup while also creating mechanical resistance when covering the natural torso flexion point of the waist.

Patterning Concept

Garments shall feature a tailored four-piece outer shell with a two-piece moisture barrier and lining. A pant with a four-piece moisture barrier and thermal liner shall be provided, at no additional charge, when and if an individual's tailoring needs require it.

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 leg-to-torso interfaces.
- incorporate an oversized diamond-shaped crotch insert, graded according to size, for maximum action stride, optimum stepping reach and no "in-crotch" seaming.
- 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 inches (10.2 cm), graded to size.

- ensure that pants rest in normal body line balance of 22 inches (55.9 cm) center distance at the cuff.

Reinforced Cushioned Knee

The cushioning for the knee reinforcement, and the thermal pad sewn to the internal side of the thermal liner assembly, shall provide a minimum of 25 CCHR and be comprised of breathable, fiber based materials.

Suspender Buttons

Eight (8) heavy duty, rust-resistant suspender buttons shall be positioned around the waist. Suspender buttons shall be mounted through waistband of triple layer outer shell material that is internally reinforced with an additional band of coated needlepunch aramid.

Liner Attachment and Inspection Port

The 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 to the waistband, at the waist, with seven (7) evenly-spaced glove snaps.

The liner system design shall not allow products of combustion or other contaminants to move into the liner interior between the moisture barrier and thermal liner. For instance, separately hemmed and bartacked liner and moisture barrier with open edge designs would not be acceptable.

The thermal liner/ moisture barrier shall incorporate a hook and loop fastening port at the right side fly seam to allow access for field inspection of the moisture barrier membrane, seam sealing and thermal insulating layer/ quilt stitching.

Pant Certification Label on the Liner

The pant certification label on the liner shall be integrally printed on FR Cotton Indura and lockstitched to the inner left hip area.

Pant Certification Label on the Shell

The pant certification label on the shell shall be integrally printed on FR Cotton Indura and lockstitched at the top rear of the waist, at the inside.

Fly Front

The outer shell fly shall be lockstitched to the left side of the front opening and shall be in proportion to waist size and crotch rise in both length and width. Fly inner lining shall extend at least 2 inches (5.1 cm) to the left of the outer shell fly attachment seam and shall be constructed of certified breathable moisture barrier and thermal liner. The right front pant opening shall have an internal facing extending at least 2 inches (5.1 cm) to the right and constructed of specified fabric.

In combination with the liner, the system shall offer 360-degree protection without gaps during movement of the outer shell moisture barrier and thermal liner. Closure shall be by means of a minimum 1.5-inch-wide (3.8-cm-wide) hook and loop fastener, and all construction techniques used shall provide liquid penetration protection under the NFPA 1971 Whole Garment Liquid Penetration Test. The fly shall be graded to the waist size of garments and crotch rise.

Outer Shell Material

7.0 oz.; Kevlar/Nomex ripstop weave; 40% Nomex/60% Kevlar; EWR - Black

Thermal Lining Material

7.4 oz. calendared 100% spun 3.6 oz. Meta Aramid facecloth; 1 layer of 2.3 oz. E-89, and one layer 1.5 oz. E-89

Moisture Barrier Material

Crosstech Black on a 3.2 oz. Nomex III A facecloth

Pant Custom Options

Instructions in this custom options section that contradict earlier specifications or statements supersede those earlier specifications or statements as long as the required certifications are not compromised.

NFPA 2007 Edition Construction and Labeling

Narrow 1.5" Velcro Fly

Inspection Port Liner

Liner Detachable

3" Cuff trim -Lime 2-Tone Scotchlite

Wick Guard on Liner

Angled Cuffs -Pants -Kevlar/Nomex OS Black

BiFlex Heat Channel Knees - Kevlar/Nomex OS Black

****MUST RAISE KNEES 1" ABOVE STANDARD PLACEMENT****

Take Up Straps 2 Postman -Kevlar/Nomex OS Black

Bellows Pocket -1 -Pants -Kevlar/Nomex OS Black - Left Leg - 8" x 8" x 2"

Full Kevlar Lined - Left Leg

****Both Bellows Pocket and Contoured Pocket to be Full Kevlar Lined****

Tool Divider -Pants -Kevlar - Left Leg

6" high - place inside left bellows pocket at bottom on pant portion NOT on pocket
- divide into 2 equal compartments

2" Velcro on Bellows Pockets & Flaps - Left Leg

****Both Bellows Pocket and Contoured Pocket to be bartacked all 4 corners**

****Bartack All 4 Corners of Bellows Pockets - Left Leg**

****Both Bellows Pocket and Contoured Pocket to be Bartacked Kevlar Lined**

X-Large Contoured Pockets -1-Pants -7.5 oz Kevlar - right Leg - 10" x 10" x 2"

Bellows Pocket Divider -Kevlar - right Leg

divide right bellows pocket

Pencil Pocket -Pants -Kevlar - inside left bellows pocket-pant - 6" x 3"

place centered at bottom of tool pocket divider

Belt - Kevlar with Quick Release Buckle
 Belt Loops (7) on Pants - Kevlar/Nomex OS Black
 Snap Style Suspender Attachment
 Dyna-Fit Suspenders w Snap Attach and Quick Adjust Installed
 Suspender Padding

FIREFIGHTING BOOTS

General

14" high pull-on, fabric/leather bunker style boot with patented 3" sloped PowerBack for less weight and added comfort in rear knee area. Side and back stays, fire resistant fabric, water-repellent leather, safety toes, electrical hazard rated soles, steel bottom penetration resistance barrier, steel shank, shinguard and quick donning and doffing features for fire suppression personnel. Safety boots must meet or exceed

- NFPA 1971 "Standard on Protective Ensembles for Structural Fire Fighting" 2007 edition.
- Class 75 impact resistance/compression resistance requirements of ASTM F2413-05.

Uppers

The uppers shall be 7½ oz. Nomex®/Kevlar rip-stop fabric covers shaft of boot. MIL AB 5½ oz. per square foot silicone impregnated full grain cowhide leather covers shinguard, straps, and heel and vamp area.

Toe Covering

Fire resistant, abrasion resistant rubber shall cover the entire frontal toe area and incorporate three horizontally extended durability bumper cleats to deter toe area abrasion and extend the life of the boot.

Heel

A fire resistant, abrasion resistant reflective rubber compound shall cover the heel area with 3 horizontal cleats stitched and die cut through 5 ½ oz. silicone impregnated leather. Exposed cleats aid donning and doffing of the footwear and extends and protects wear life of moisture barrier and heel counter.

Pull On Loops

Four (4) one piece, ¾" wide, fully reinforced, pull on leather straps fastened approximately 1" below top line to exterior boot shaft utilizing 2" x 1 ½" shield-shaped anchor shall be provided. Stitching shall not penetrate Crosstech bootie package. Straps shall be replaceable by construction.

Safety Toe

A .062" (+.005"/-.0025") austempered oblique shaped steel toe treated with zinc phosphate rust preventative shall be provided. Hardness of steel toe shall be 42-54rc (Rockwell Hardness).

Shank

The shank shall be 19 gauge, austempered steel with triple linear ridges treated with zinc phosphate rust preventative.

Puncture Resistant Bottom Plate

Boots shall have a stainless flex steel bottom plate with full hard temper, tensile 180,000 psi minimum and .017" - .02" thickness sized to allow maximum bottom puncture resistance protection.

Insole

The insole shall be 7 iron Texon designed for welt construction boots. Protex treated for resistance to fungal growth. Wicks perspiration away from the foot and dries quickly. Low weight with excellent flex endurance.

Insole Cavity Filler

The insole cavity filler shall be ground cork and binder compound.

Removable Insert

Inserts shall be removable, orthopedically correct, PU insert with fabric liner. The fabric liner shall control bacteria and regulate temperature in foot area. By design inserts are to be both removable and replaceable.

Midsole

The midsole shall be full length 4 iron black neoprene material.

Sole and Heel Blocker

Fire resistant, stitched-down, Vibram sole designed with lugs angled to provide substantial edging capabilities on both ascents and descents. Center medallion of stars surrounded by lug pattern to provide maximum wear and traction. Larger lugs are close together for durability yet separate for enhanced grip. Smaller lugs for more aggressive traction. Larger lugs on heel area to assure long lasting durability in this high-wear area. Lugs grouped for durability and grooved for traction. Sole is to be replaceable by construction.

Sole Compound

Fire/Ice compound has a minimum NBS abrasion of 120 and shall withstand extreme heat. Superior traction shall be provided on snow and ice as well as wet or dry surfaces.

Welt

Full wrap-around, reflective, GoodYear neoprene storm welt.

Shinguard

The shinguard shall be texon 4 Iron 428, low weight, natural fiber for quick drying and high performance and protection. Shinguard dimensions are 1 11/16" x 6 7/16". External silicone impregnated MIL-AB leather cover measures 2 3/8" x 7 3/16".

Backpart Molded Heel Counter

The molded heel counter shall be thermoplastic backpart. It shall provide for proper shaping in heel area to insure comfort, fit and durability, and less stress in the lower back and pelvic area.

Thermal / Cut Resistant Barrier

The thermal / cut resistant barrier shall be a full height bootie of 7.5 oz. per square yard, 100% virgin Kevlar[®] felt.

Bootie System

The bootie system shall be a laminate of thermally bonded nonwoven fabric facecloth, 7.5 oz. 100% virgin Kevlar felt and CROSSTECH Footwear Fabric. Five piece base bootie with two piece upper quarter pattern. All seams butt stitched and sealed with Gore-Tex tape. Kevlar and facecloth fabric located interior to the Crosstech moisture barrier to prevent moisture wicking.

Shaft Reinforcement

Blunt force puncture protection reinforcement material by Texon shall be provided to protect the moisture barrier from incidental punctures while not obstructing breathability.

Shaft Top Line

Finished with leather American top binding.

Thread Uppers

Nomex 24/4 and 105 Kevlar.

Upper Stitching

Shall be Singer lock stitched a maximum of ten stitches per inch.

Upper Stitch Configuration

Shall be single needle lock stitch used on side binding and backstays. Double needle lock stitch used on vamp/foxing to shaft connection. Pull-on loops shall be secured with single needle lock stitch.

Thread- Welt to Midsole

Welt to midsole thread shall be #690 Bonded Nomex.

Thread- Inseaming

Inseaming thread shall be Nomex 24/4 and 105 Kevlar.

Sole and Heel Blocker Adhesion

High temperature adhesive shall be used to affix blocker to neoprene midsole. No nails shall be permitted.

Markings

The interior label shall contain all information as required by NFPA 1971 "Standard on Protective Ensemble for Structural Fire Fighting" 2007 edition, Class 75 impact resistance/compression resistance requirements of ASTM F2413-05.

Bar Coding

Boots will be marked with Code 128 symbology incorporating a unique serial number. Symbology information will also appear in written text in the English language. Bar-coding will appear in the right boot of each pair.

Quotation

Air One Equipment, Inc.
 360 Production Drive, South Elgin IL 60177
 Telephone: (847) 289-9000
 Fax: (847) 289-9001

TO: Downers Grove Fire Department

Date: 9/10/12

ATTN: Jeff Pindelski

REF: Gear Contract

We are pleased to submit the following quotation in accordance with your request and subject to the Terms and Conditions listed below.

Qty	Part Number	Description	Each	Extended
1	BOOT	Pro Warrington 5006 Boot, Haix 10" or 14"	\$295.00	\$295.00
1	TAILS	Morning Pride Coat ILDOWN00046 34i3	\$1,225.00	\$1,225.00
1	PANT	Morning Pride Pant ILDOWN00047 34i3	\$860.00	\$860.00
		Effective May 1, 2013		
1	BOOT	Pro Warrington 5006 Boot, Haix 10" or 14"	\$306.00	\$306.00
1	TAILS	Morning Pride Coat ILDOWN00046 34i3	\$1,268.00	\$1,268.00
1	PANT	Morning Pride Pant ILDOWN00047 34i3	\$890.00	\$890.00
		Effective May 1, 2014		
1	BOOT	Pro Warrington 5006 Boot, Haix 10" or 14"	\$317.00	\$317.00
1	TAILS	Morning Pride Coat ILDOWN00046 34i3	\$1,313.00	\$1,313.00
1	PANT	Morning Pride Pant ILDOWN00047 34i3	\$921.00	\$921.00

4 Week Delivery.

**Industry average increase is between 5 and 6%
 Above is roughly 3.5%/Year**

Total

By: _____
 Joe Levey-Air One Equipment, Inc.

Exhibit c