

**Body Armor**  
**Safariland Second Chance ST01 Level II**  
**Concealable Body Armor including the**  
**Second Chance Apex 2 Carrier,**  
**And**  
**Second Chance Tactical Assault Carrier with Fixed Pockets**  
**Specifications,**

**Scope:**

The following detail information will be a guideline to be used for purchasing a bullet resistant vest for the State of Tennessee. For reasons of safety, comfort, and quality the State has chosen to use a soft body Safariland Second Chance ST101 Level II Concealable Body Armor.

The successful vendor shall be required to supply the individual vest with applicable options and colors as ordered for male or female personnel. All vests shall provide protection against projectile penetration while reducing blunt trauma and vest distortion.

The concealable soft body armor model selected shall be Certified under the National Institute of Justice (NIJ), Standard 0101.06, Ballistic Resistance of Police body armor for bullet resistant body armor threat Level II.

Only body armor models that have been tested by the National Institute of Justice (NIJ), National Law Enforcement and Corrections Technology Center (NLECTC) and found to comply with the requirements of NIJ 0101.06 requirements standard for threat Level II armor will be submitted under this specification.

**Certification:**

Armor shall be listed on Compliant Products List by National Institute of Justice (NIJ) for Level II per standard 0101.06 (<http://justnet.org/index.html>). The brand/model bid must be listed on this website as of the bid opening date to qualify for award.

**Applicable documents:**

The following third party standards, specifications, documents, amendments and/or applicable parts of issued in effect on the date on contractual purchase, shall form part of this specification:

1. NIJ Standard 0101.06 Ballistic Resistance of Police Body Armor
2. MIL-STD-662F, V50 Ballistic Test for Armor
3. Federal Standard No. 751, Stitches, Seams and Stitching
4. MIL-STD-T-43548, Thread
5. MIL-STD-F-21480, Hook and Loop
6. Mil-1-45208A, dated December 16, 1973, Quality Control
7. ANSI/ASQC Q9000 Quality standard, dated August 1, 1994
8. ISO 9001: 2008 quality assurance certification
9. Additional test reports of "Special Threat Testing" from a Certified NIJ laboratory are required

### **Design requirements:**

The soft body armor detailed herein is intended to be the standard issue armor for each officer. It is also intended for daily wear as an undergarment and occasional use as an outer garment for special operations. Therefore, vests shall be designed and constructed to provide:

1. A high degree of concealment.
2. Minimum restriction of motion or mobility
3. A pocket on the front of the ballistic panel designed to hold a trauma-reducing device.
4. Tails on the front and back garment or carrier panels to keep the armor from "riding up" while sitting or driving.
5. Removable washable garments or carriers for ease of cleaning.
6. Optional garments or carriers that quickly and easily convert the standard ballistic panels for over-the-clothes wear.
7. For comfort and mobility the vests shall be designed to meet the wearer's side.
8. Unisex vests are acceptable for pooled standard size body armor vests; however they are not acceptable for the fitted body armor vests.

### **General design:**

The soft body armor will be designed to be worn comfortably while being concealed under a lightweight shirt and shall also be designed for wearing as an external over-the-clothes vest, by way of optional multi-assignment carrier (MAC).

The general armor configuration shall be a slip-on design that covers the majority of the upper torso. Elastic straps with hook and loop fasteners shall be provided for proper adjustment and fit at the waist and shoulders. These straps shall be designed in such a way as to prevent the front, back or sides from "riding up" or "slipping down" on the wearer during periods of intense physical activity such as running, jumping, or climbing.

### **Ballistic panel materials:**

All materials shall be new, unused and without flaws that may affect durability and function. Both front and back ballistic panels are to contain high performance bullet-resistant materials. The ballistic panels shall be constructed of two (2) or more of the following: Twaron, Spectra Shield, Kevlar, Goldflex, Dynema or equal. No other ballistic fabric combinations are acceptable. Bidders submitting alternate non-conforming combinations will be rejected.

### **Special Threat:**

Ballistic panels must be tested at an NIJ independent laboratory for the following special threat rounds:

WINCHESTER 40 CAL 165GR. SXT

SPEER 357 SIG 125GR

FEDERAL 9MM LUGER 124GR +P HST

WINCHESTER 9MM LUGER

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**Labeling:**

Every NIJ-compliant ballistic panel shall have a label, which shall be permanently attached to the panel face of the panel. The label shall contain the following information:

1. Name, logo or other identification of the listed company.
2. Rated level of protection and reference to the edition of the standard (i.e. Type II in accordance with NIJ Standard 0101.06).
3. Length of manufactures warranty period for ballistic performance of the model with the originally declared threat level.
4. Size (if custom fitted, provision for the name of the individual for whom it is made).
5. Serial number.
6. Lot number.
7. Location of manufacture.
8. Date of manufacture.
9. Date of issue line (to be filled in by user).
10. Model designation as named in the NIJ Notice of Compliance.
11. Proper orientation of the ballistic panel in the carrier clearly identified to indicate strike face or body side.
12. Care instructions for ballistic material in accordance with 16 CFR 423 Part 423, Care Labeling of Textile Wearing Apparel and Certain Piece Goods, as amended effective April 9, 2004; Federal Trade Commission Regulation Rule.
13. A warning in type at least twice the size of the rest of the type on the label, stating that the armor is not intended to protect the wearer from rifle fire and, if applicable, that the armor is not intended to protect the wearer from sharp-edged or pointed instruments (Note: Printing color changes are acceptable but cannot be substituted for the type size requirement).

**Ballistic panel cover material:**

Each ballistic panel shall be fully enclosed within a cover (the “cover”) made from a minimum of 70 denier, nylon rip stop, DWR, urethane coated fabric, capable of withstanding minimum water pressure of 10 psi as per the American Association of Textile Chemist and Colorists (AATCC) test method 35-2000. The color shall be sealed around the entire ballistic panel via ultrasonic bonding, using a minimum frequency level of 20 KHz.

*Any sample submitted that utilizes stitching in the ballistic panel cover will be rejected, no exceptions.*

**Ballistic panel labeling:**

Each ballistic panel will be labeled in strict compliance with the requirements as set forth in the most current NIJ standards.

**Vest outer shell or carrier material:**

The machine washable carrier shall be removable from the ballistic panels for laundering. The carrier systems body side fabric shall consist of smooth fit anti-microbial mesh material to eliminate uncomfortable body side seams and bulges, there shall be no zippers or hook and loop closures against the body. The exterior of the outer

shell will be a soft micro-fiber material. The outer side of the carrier shall be manufactured from first quality 100% polyester micro fiber material. Low profile loops will be used from strap attachment points to reduce bunching and pulling of the uniform shirt.

**Soft trauma insert:**

A trauma reduction insert shall be constructed as the vest ballistic panels and cut no smaller than five inch by eight inch (5x8) shall be provided. Each trauma reduction plate shall be fully enclosed within a cover (the “cover”) made from a minimum of a 70 denier, nylon rip-stop, DWR, urethane coated fabric, capable of withstanding minimum water pressure of 10 psi as per the American Association of Textile Chemist and Colorist (AATCC) test method 35-2000. The cover shall be sealed around the entire trauma reduction plate via ultrasonic bonding, using a minimum frequency level of 20 KHz.

The trauma reduction plate must attach directly to the strike face of the ballistic panel cover by means of an attachment system that does not have any stitching. The trauma reduction plate must be removable should the wearer so choose.

*Any sample submitted that utilizes stitching in the trauma reduction plate cover will be rejected, no exceptions.*

**Quality control:**

All soft body armor will be manufactured with a 3<sup>rd</sup> party Quality Assurance Program specifically certified under the Quality Control and ANSI/ASQC Q9000 Quality standard dated August 1, 1994.

The documented quality control system must be designed to insure the integrity and quality of the manufactured products. The quality control system shall control all manufacturing process and incoming raw materials. The manufacturer must have an in-house ballistic laboratory capable of performing ballistic testing of incoming raw materials in in-process samples. The manufacturer must have the capability of performing testing in accordance with MIL-STD-662E and NIJ 0101.06 Standard for bullet resistant body armor. Procedures for lot testing of incoming raw materials in in-process samples must be incorporated into the quality control system. All incoming ballistic material shall undergo V50 ballistic lot tests in accordance with MIL-STD-662E. Every vest panel manufactured shall be inspected for material defects and properly ply counts. Every vest panel manufactured shall be subsequently inspected for proper ballistic panel stitching. Covers and accessories shall be re-inspected during manufacturing for defects at selected point during manufacturing to assure to the absence of hidden defects in the final item. In addition, each vest shall receive a final inspection prior to shipment. This inspection shall include a review of the quality control check sheet and confirm the product against the customer’s order.

A copy of the Certificate of Accreditation, as well as the manufacturer’s quality control program must be submitted with bid documents. Each unit delivered shall have an individual serial number. Each serialized soft body armor shall be traceable to its original ballistic material lot number and ballistic material mill roll number. The vendor must have the ability to trace serial numbers.

**Pooled Armor – Standard Sizes:**

Pooled armor will be standard sized body armor (X-Small, Small, Medium, Large, and X-Large) to be utilized by guests and for emergency situations. Pooled armor is not fit to one particular person. Sizing should be industry standard. Each vest shall be clearly marked with the size on both the panels and the carrier.

### **Measurement and fitting:**

The armor manufacturer or manufacturer's authorized representative shall take individual officer measurements. Each delivered vest shall fit in accordance with stringent guidelines. Body armor fit guidelines are as follows:

1. The sides of the front and back ballistic panels shall meet or overlap.
2. The bottom edge of the front ballistic panel shall be within 1" of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.
3. The bottom edge of the back panel shall be within 1" of the highest waist belt (usually the duty belt) measurement when the wearer is in the standing position.
4. Female sizes are determined based on individual measurements including bust size and conformed through the use of sizing/fit sample in conjunction with a tape measure.

### **Proximity for fitting:**

The successful bidder must provide personnel and/or locations in sufficient quantity to adequately take initial measurements and make fitting plus any additional measurements that are required. The Department of Safety and Homeland Security ("TDOSHS") will coordinate on site "fitting sites" and dates and times with the vendor and when practicable consolidate its personnel to county or regional sites to reduce travel time for the vendor.

It will be required that the successful bidder have one or more locations at all times during the contract period. The location(s) for measurement taking must also be available during a normal business week at any time during the contract period. Hours of operation of these facilities shall be Monday through Friday, with normal business hours of 8:00 am to 5:00 pm with the exception of recognized holidays.

### **Adjustments and alterations:**

Any vest issued that does not fit properly shall be returned to the manufacturer for alterations at their cost. All such fit adjustments shall be performed in fourteen (14) days or less. The bidder must repair or replace any and all vests that become unserviceable because of manufacturing defects during the required warranty period.

### **Post-award and Retest policy:**

The State reserves the right to perform post-award laboratory testing on any and all armor submitted to verify strict conformance to these specifications. This testing will be done at the departments' expense. This testing will be conducted at a recognized NIJ testing laboratory in strict accordance with retest methodology detailed under the NIJ 0101.06 standard. At least 10 days notice will be given in writing to the manufacturer so as to allow for attendance and/or observation of the tests.

### **NIJ test documentation:**

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Independent laboratory testing documentation showing compliance with the NIJ 0101.06 standard threat Level II certification for all armor submitted. Vest certified to earlier NIJ standards will be rejected from the bid.

**Proof of Insurance:**

Proof of product liability insurance is required. Minimum acceptable limits are twenty million dollars (\$20,000,000) coverage per incident. The insurance company shall be authorized to transact business in the state of Tennessee.

**Warranty:**

Ballistic panels: for five (5) years after date of purchase the manufacturer warrants the ballistic panels against defects in materials and workmanship.

Garments and carriers: the carriers or garments shall be warranted for at least twenty four (24) months.

**Packaging and marking:**

All soft body armor shall be packaged and shipped consistent with good commercial practices. Each set of armor, along with its optional equipment, shall be placed in an individual plastic bag. The soft body armor shall be packed into suitable corrugated cardboard box. Each bag shall have the officer's name clearly marked for easy identification (if applicable). The box shall allow for normal shipping without damage to the soft body armor.

**Pallets:**

Unless otherwise specified on the ordering agency's purchase order document, standard commercially available pallet sizes should be used. All pallets shall be of sturdy construction and adequate condition to assure delivery of the goods without damage to the goods or safety hazards.

Exchange pallets may be available, however, the State assumes no responsibility for the availability to exchange pallets. Delivery drivers shall not remove more pallets from the location than delivering at time of delivery.

Bidder may offer wood pallets that are produced from a company participating in a forest stewardship program where the forest is managed to conserve biological diversity, natural resources and maintain a thriving ecosystem.

**Articles required for bid submission:**

- Factory Authorized Distributor: Bidders must provide a Factory Authorization Letter from the manufacturer identifying the bidder as an authorized distributor / dealer for the products offered in each body armor category. Only bids submitted by manufacturer or an "Authorized Distributor / Dealer will be accepted. An "Authorized Distributor / Dealer is a supplier who is normally and regularly engaged in the business of selling the products of the manufacturer. To qualify as an Authorized Distributor / Dealer, a supplier must have technical expertise in the product line being offered for sale, employ individuals who are knowledgeable with the products being offered, maintain an inventory of finished product and/or spare parts and offer technical assistance and repair capabilities. Authorized Distributors / Dealers must be listed in the manufacturer's written or electronic list of distributors if such a list exists. A "one-time" agreement

is not acceptable. All Authorized Distributors / Dealers must provide factory or factory authorized service for the products they are offering.

- NIJ test documentation: Independent laboratory testing documentation showing compliance with NIJ standard 0101.06 Ballistic Resistance Concealable Police Body Armor Level II.
- Armor Guarantee/warranty: The bidder shall certify that any armor exhibiting defects during the warranty period shall be replaced without cost, including freight, by the bidder and/or the manufacturer.
- Ballistic panels: The manufacturer shall certify that all ballistic panels of an armor unit are warranted for at least five (5) years from date of delivery.
- Garments or carriers: The manufacturer shall certify that the carriers or garments shall be warranted for at least twenty-four (24) months from the date of delivery.

**Articles required prior to award:**

- Proof of insurance: Proof of product liability insurance. Minimum acceptable limits are twenty million dollars (\$20,000,000.00) coverage per incident.

**Armor Sizes:**

Size	Length	Chest
EXTRA SMALL (XS)	S/R/L	30-32
SMALL (S)	S/R/L	34-36
MEDIUM (M)	S/R/L	38-40
LARGE (L)	S/R/L	42-44
EXTRA LARGE (XL)	S/R/L	46-50
SPECIAL ORDER	Dimensions as provided	

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**Tan Second Chance Apex 2 Carrier for Concealable Level II Vest  
Model No. SC-APEX2:**

**Carrier:**

- Carrier shall be color matched, machine washable, lined with breathable material and have pockets in the front and back to securely retain armor panels.
- Each pocket shall facilitate unrestricted insertion and removal of armor panels.
- Pockets shall have a secure closure to retain armor panels during body movements.
- Shoulder straps shall be 2 to 2.5” wide and attached with “Hook & Loop” fastener to the front portion.
- Carrier shall have adjustable elastic straps on each side under the arms for closure.
- Side straps shall attach to the front section by mating Hook & Loop fasteners.
- Side straps shall prevent “curl-ups” and allow for a 4” adjustment while maintaining overlap.

- Carrier shall have a back shirttail and a front shirttail that accommodates trouser fly.
- Tan in Color
- Shall be provided at no additional cost.
- Two (2) carriers shall be provided, per vest issued.

**Sizes:**

Size	Length	Chest
EXTRA SMALL (XS)	S/R/L	30-32
SMALL (S)	S/R/L	34-36
MEDIUM (M)	S/R/L	38-40
LARGE (L)	S/R/L	42-44
EXTRA LARGE (XL)	S/R/L	46-50
SPECIAL ORDER	Dimensions as provided	

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**Black Second Chance Tactical Assault Carrier with Fixed Pockets  
Model No. SC-TAC1-PKT:**

**Tactical Assault Carrier:**

- The TAC includes durable non-skid material in the shoulder area for dual weapon retention,
- A rear drag strap for ease of extraction in a downed officer situation,
- An upper arm and groin attachment system for optional extremity protection.
- Available in custom sizes.
- Must include 2 custom ID patches (front 1” “TROOPER” in gold, and back 2” “TROOPER” in gold for identification purposes.
- Permanent Pouches include
  - (1) 6” x 6” Utility,
  - (1) 2” x 6” Flashlight/Baton,
  - (1) 4” x 6” Dual Magazine (Handgun or Rifle),
  - (1) 4” x 6” Radio, and
  - (2) 3” x 3” Handcuff