1. SCOPE

1.1. This specification covers concealable, stab/slash resistant vest for use by law enforcement officers of the Department of Public Safety & Correctional Services/Division of Correction. This vest is to be issued to male and female correctional officers for daily wear. The following detailed specifications set forth the quality, style, color, shape, construction, weight and minimum stab performance and quality of a concealable soft body-armor (stab-resistant vests).

1.2. All bids received on concealable armor systems must include full product descriptions, drawings and/or photos, technical specifications, as well as a list of at least ten (10) law enforcement agencies currently using that model armor for reference with their bid.

2. SPECIFICATIONS—NO GENDER NEUTRAL VESTS WILL BE ACCEPTED:

2.1. The Vest detailed herein is intended to be the standard issue vest for each member of the Department of Public Safety & Correctional Services/Division of Correction. Vests shall be designed to be worn comfortably while concealed under a lightweight uniform shirt. All materials and workmanship are to be the highest possible quality.

2.2. Vests shall be designed and constructed to provide:

2.2.1. Protection that meets or exceeds NIJ Standard 0115.00 for Spike class, Level 2 protection.
2.2.2. Blunt trauma reduction.
2.2.3. Maximum torso coverage, allowing adequate mobility to perform tasks.
2.2.4. Puncture and slash resistance from of handmade pointed weapons.

3. LOW PROFILE HOOK COMPATIBLE FABRIC

3.1. The Department of Public Safety requires the vests have the greatest amount of adjustment area possible in critical fit areas. A size thirty-six regular (36R) vest shall have a minimum of 210 square inches of Low Profile Hook Compatible.

4. SHOULDER AND WAIST ADJUSTMENT STRAPS

4.1. Shoulder and waist straps must be constructed from a soft elastomeric composite material that stretches in every direction, with a nominal thickness of 2mm. To increase adjustment range the waist straps must be removable and provide for a minimum of three inches of girth adjustment.

5. HOOK FASTENERS

5.1. Hook fasteners must be constructed from a flexible molded composite material with a minimum of 900 hooks per square inch with an average sheer of 23 PSI.

6. ANTI-MICROBIAL WICKING FABRIC
6.1. The body side fabric shall be an anti-microbial mesh fabric containing 74% polyester and 26% micro-safe acetate.

7. TAILS

7.1. Shirttails both front and rear must be constructed from the same anti-microbial wicking fabric as the body side of the vests.

8. FRONT LOADING PANELS

8.1. Ballistic panels must be inserted from the strike-face side of the garment and secured by means of a self-locking #2 coil zipper.

9. STAB PANEL DESIGN

9.1. The sides to provide side protection. The biceps/chest region shall be cut with sufficient space to minimize irritation and restriction of arm movement during common Armor panels of the soft body armor meeting this specification shall provide light weight comfort utilizing 100% premium grade first quality Kevlar Correctional fiber or equal. The fabric shall be durable and water repellant treated. A test confirming durable water repellancy of fabric shall be furnished prior to bid award.

10. The soft body armor shall be designed for regular daily wear as an undergarment. Therefore, vests shall be designed and constructed to provide (1) durability, (2) ease of cleaning, (3) minimum restriction of motion or mobility, and (4) the greatest amount of ballistic coverage consistent with comfort and concealment.

11. The general configuration shall be the slipover vest type that covers the majority of the upper torso, including side coverage. The entire vest perimeter shall be curved. No sharp corners or straight edges shall be allowed.

12. The front armor panel shall cover the chest approximately up to the collar bone, have a scooped neck sufficient to maintain concealability when wearing an open collar shirt, extend downward to the waist but not far enough to "push up into the throat" when the wearer is seated, and extend around duties such as the operation of motor vehicles.

13. The rear armor panel shall cover the back of the torso from just above the shoulder blades down to a position above the waist belt.

14. Having side coverage from both the front and rear panels shall cover the sides of the torso, as the department has determined that such a configuration maximizes both coverage and comfort. The maximum gap at each side shall be a minimum of one inch.
15. Each piece of soft body armor shall include the following:

16. One (1) set of thrust resistant panels (1 front, 1 rear)

17. One (1) complete washable carrier (front and rear panels) with shirttails.

18. **ARMOR PANEL MATERIALS**

   18.1. All materials shall be new, unused and without flaws that affect appearance, durability and function.

   18.2. The armor panels shall be constructed of not less than 22 layers of Kevlar Corrections fabric or equal.

   18.3. It is the intent of the agency to procure the lightest weight, best performing personal armor available in relation to areal density, therefore, a vest section of 12” x 12” (one square foot), must not exceed 9.46 oz. per square foot.

19. **PANEL COVER MATERIAL**

20. Each armor panel shall be enclosed in a nylon satin finished, water resistant cover.

21. **GUARANTEE / WARRANTY**

   21.1. The manufacturer shall warranty its ArmorWear to be free from defects in workmanship and materials for a period of five (5) years from the date of purchase.

22. **CARRIER SYSTEM GUARANTEE / WARRANTY**

23. The manufacturer shall warranty its ArmorWear Carrier System to be free from defects in workmanship and materials for a period of one (1) year from the date of purchase.

24. **TRAUMA REDUCTION DEVICE**

25. **Option 1-**

   25.1. A trauma reduction device (TRD) shall be included with each vest. It shall fit into the pocket sewn onto the front of each vest garment. The TRD shall be constructed from either a unidirectional or woven bullet-resistant material cut into a five inch by eight inch (5” x 8”) [12.7cm X 20.32cm] rectangle. This TRD shall increase the protective V-50 value a minimum of one thousand feet per second (1,000) [304.8 mps] and reduce blunt trauma a minimum of ten (10%) per-cent over the coverage area. It shall be encased in a 200 denier nylon slip.
25.2. The nylon slip shall be sewn shut to hold the layers together, but fitted loosely so as to provide some flexibility.

26. **Option 2**-Encapsulated Stainless Steel

26.1. A trauma reduction device (TRD) shall be included with each vest. It shall fit into the pocket sewn onto the front of each vest garment. The TRD shall be constructed of style 301 stainless steel, forty thousandths of an inch (.040") [1.02cm] thick and shall be cut into a five inch by eight inch (5" x 8") [12.7cm X 20.32 cm] rectangle with rounded corners. Steel plate shall also be completely encapsulated in a coating of black polyurethane. The total maximum weight for the TRD is eleven and one-half ounces (11.5oz.) [326.02gm].

27. **VENDOR QUALITY ASSURANCE PROGRAM**

27.1. The vendor shall have a quality control program, which must be submitted prior to bid award. The program must describe how the requirements are implemented and enforced. The program shall include a factory test plan as well as identify the quality control organization.


27.3. The program must establish a policy for controls at; a) Pre-production (Protective Design), b) production (Order Entry, Protective Panel Assembly, Garment Assembly), and c) post production (After Sales Service).

27.4. The armor manufacturer shall maintain a formal quality control program and manual. The quality control program shall be written and shall include a factory test plan that identifies the control organization.

27.5. The vendors quality assurance program shall be responsible for quality control items related to serialization, traceability and certification records for soft body armor.

27.6. **Armor Delivery**

27.7. The bidder shall guarantee that all armor delivered meets the following requirements:

28. Each protective panel shall be identical in composition and construction.
29. Each serialized protective panel shall be traceable to its original protective material lot number.

30. **MEASUREMENTS AND FITTING**
31. Custom Fitting: Individual officer measurements will be the responsibility of the successful vendor. Each delivered vest shall fit in accordance with stringent guidelines. Soft body armor fit guidelines are as follows:

32. The V-Neck cutout of the upper portion of the front protective panel shall be fit so as to maintain concealability when worn with an open-collar uniform shirt.

33. The bottom edge of the front protective panel must be within one-half inch (1/2") [12.7mm] of the highest waist belt (usually a duty belt) when the wearer is in a relaxed seated position.

34. The side edges of the front and back protective panels shall be fit for a one-half inch (1/2") [12.7mm] gap between panels during the initial custom fitting.

35. The bottom edge of the back protective panel must be within one-half inch (1/2") [12.7mm] of the duty belt when the wearer is in a standing position.

35.1. The successful bidder must provide personnel and/or locations in sufficient quantity and quality to adequately take initial measurements and make fittings. It will be required that the successful bidder have one or more permanent outlets at all times during the contract period.

35.2. 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 such as 8:00 a.m. to 5:00 p.m., with the exception of recognized State holidays.

35.3. Any vest issued that does not fit properly shall be returned to the manufacturer for alteration. All such fit adjustments shall be performed in fourteen (14) days or less.

35.4. The bidder must repair or replace any and all vests that become unserviceable because of manufacturing defects during the required warranty period.

35.5. The bidder must provide the proper fitting for the “Athletic, Normal and “Portly Built” individual(s).

36. BID SUBMISSION MATERIALS

37. Armor Samples: Samples of both the male and female vests being bid are required and shall be submitted by the sample due date (see below). Samples shall be provided at no cost to the State of Maryland, Department of Public Safety and Correctional Services and must be clearly marked with the bid number and the bidder’s name. The samples shall be a Male, 42-44 Regular or equal and a Female, 38-40 Regular.
SEND SAMPLES BY Tuesday, May 28, 2013, 4:00 p.m. e. s. t. to:

Major Jeff Wantz
Department of Public Safety and Correctional Services
6776 Reisterstown Road
Suite 311-04b
Baltimore, MD. 21014

37.1. Samples will be evaluated to determine compliance with all major characteristics of these specifications. Failure of samples to conform to all such characteristics shall be just cause for rejection of the bid.

37.2. Samples may be dismantled and/or subjected to destructive testing for evaluation and to verify compliance with specifications. Samples may also be returned in such condition after testing, i.e., dismantled.

37.3. Samples will be returned at bidder’s expense with no financial liability to be incurred by the Department of Public Safety & Correctional Services for their shipping, loss or damage.

38. Proof of Insurance

38.1. The manufacturer shall submit proof of product liability insurance in the amount of $20,000,000.00 coverage. The insurance carriers must be admitted under the Maryland State Insurance rules. Self-insurance is unacceptable. Coverage shall be maintained at all times during the contract period. If the coverage expires, or is modified at any time during the contract period, the bidder and shall immediately notify the Department of General Services.

39. GUARANTEE/WARRANTY

39.1. Any armor exhibiting defects during the warranty period shall be replaced without cost, including freight, by the bidder and/or manufacturer.

40. Protective Panels: The manufacturer shall certify that all protective panels of an armor unit are warranted for at least five (5) years from date of delivery.

41. Garments or Carriers: The carriers or garments shall be warranted for at least twelve (12) months.

42. AWARD

42.1. The Department of Public Safety & Correctional Services reserves the right to review all samples and documentation of respective bidders prior to award.