

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Bid Receiving - PWGSC / Réception des soumissions
- TPSGC
11 Laurier St./ 11, rue Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

SOLICITATION AMENDMENT

MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Clothing and Textiles Division / Division des
vêtements et des textiles
11 Laurier St./ 11, rue Laurier
6B1, Place du Portage
Gatineau, Québec K1A 0S5

Title - Sujet Carrier,External,LoadCarrying	
Solicitation No. - N° de l'invitation M0077-13G104/A	Amendment No. - N° modif. 004
Client Reference No. - N° de référence du client M0077-13G104	Date 2014-05-28
GETS Reference No. - N° de référence de SEAG PW-\$\$PR-737-65027	
File No. - N° de dossier pr737.M0077-13G104	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-06-11	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Dusenbury, Debbie	Buyer Id - Id de l'acheteur pr737
Telephone No. - N° de téléphone (819) 956-9563 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

This solicitation amendment 004 is published to provide the following information:

- 1) a revised RCMP specification G.S. 1045-360 dated 2014-05-26 (**copy attached**) which supersedes all previous specifications for this requirement. This revised specification provides additional information as well as incorporates all changes to date;
- 2) at page 5 of the RCMP specification G.S. 1045-360 there is a reference to another applicable specification "RCMP, G.S. 1045-177 for Vest, Soft Body Armour". This specification (**copy attached**) is for "reference only" that may help visualize how or why the Carrier is to be used or worn;
- 3) Any references to Option 2 or Design Option 2 in the specification G.S. 1045-360 should be ignored as it is not applicable to this requirement;
- 4) Patterns are now included in the "Priority of Documents" clause of the solicitation;
- 5) To extend the bid closing date from 04-June-2014 to 11-June-2014.

At Part 6, clause 10 "Priority of Documents"

DELETE:

- "a) the Articles of Agreement;
- b) the general conditions 2010A (2014/03/01), General Conditions - Goods (Medium Complexity);
- c) Annex "A", Requirement;
- d) Specifications;
- e) Drawings;
- f) Viewing Samples;
- g) Annex "B", Federal Contractors Program for Employment Equity - Certification (if applicable);
- h) the Contractor's bid dated _____ "

AND REPLACE WITH THE FOLLOWING:

- "a) the Articles of Agreement;
- b) the general conditions 2010A (2014/03/01), General Conditions - Goods (Medium Complexity);
- c) Annex "A", Requirement;
- d) Specifications;
- e) Patterns;
- f) Drawings;
- g) Viewing Samples;
- h) Annex "B", Federal Contractors Program for Employment Equity - Certification (if applicable);
- i) the Contractor's bid dated _____

Solicitation No. - N° de l'invitation

M0077-13G104/A

Amd. No. - N° de la modif.

004

Buyer ID - Id de l'acheteur

pr737

Client Ref. No. - N° de réf. du client

M0077-13G104

File No. - N° du dossier

pr737M0077-13G104

CCC No./N° CCC - FMS No/ N° VME

A bid already submitted may be amended prior to RFP closing time by sending the amended correspondence to Bid Receiving Unit, the envelope/message bearing the PWGSC file number and the most current closing date.

ALL OTHER TERMS AND CONDITIONS OF THE ORIGINAL SOLICITATION REMAIN THE SAME.



Royal Canadian Mounted Police
Gendarmerie royale du Canada

Doc. no: G.S. 1045-360
Date: 2014-05-26

Specification

Carrier, External, Load Carrying

This document has 26 pages including the drawings.

This document was created in English.

The document is available in English and French.

☒ English/Anglaise
Français/French

The photograph on this page is for reference only.



Modifications

Date	Para. No's	Modifications
2013-02-11		Original Specification
2013-06-21	Para. 4.1.1, 4.1.2 & 4.1.3 Para. 4.1.7.1 Para. 4.1.7.2 Para. 4.3.2.1 Para. 4.3.2.4 Appendix A Scale of Measurements Drawings #1-5	Added specific direction to refer to Appendix B for required documentation. Changed length of slide fastener. Specify new side slide fastener with longer pull tab. Modify stitching requirements of webbing through all layers of front flap. Methodology of waist strap modified to encapsulate elastic. Pattern piece added to cover elastic. Modified scale of measurements. Modified drawings to show both improved stitching of webbing and encapsulated elastic and scale of measurements.
2013-07-02	Para. 4.1.11 Para. 4.3.2.1 Appendix A Appendix B	Added fusing component and Certificate of compliance documentation. Added explanation for fused reinforced piece to bottom of front flap to prevent curling. Added pattern pieces for reinforced fusing. Revised Certificate of compliance definition and added fusing requirements to criteria.
2013-08-08	Para. 2.10 Para. 4.1.5.1 & 4.1.5.2 Para. 4.1.7.1 Para. 4.1.7.3 Table I Table IV	Added specification for nylon thread. Specified Class & Type. Corrected specification for nylon thread. Corrected typo in slide fastener style number. Added specific length of fastener by size. Corrected test method for Breaking and tear strength. Corrected values for breaking and tearing strength.
2013-08-13	Para. 4.1.7.3 Table I	Corrected description of slide fastener. Changed test method and values for tear strength.
2013-08-15	Para. 4.1.9	Corrected a typo in thickness of Binding tape, missing decimal, should read .3mm.
2013-09-17	Para. 4.1.7.1, 4.1.7.2 & 4.1.7.3 Table I	Corrected slide fastener style numbers as per updated information from YKK. Amended light fastness requirements based on complaints from the field.
2013-12-20	Para. 4.1.4 Para. 4.1.8 Para. 4.1.10 Para. 4.3.2.1 Para. 4.3.2.3 Para. 4.3.2.5 Para. 4.5 and 4.6 Table II Table III	Thickness and known source of supply added. Added elastic for attachment strap. Neoprene component information updated. Loop tape attachment strap measurement changed, pen loop added and fusible reinforcement increased in size. Attachment strap modified. Lettering font identified. Label placement changed. Table requirement updated. Table requirement updated and known source of

	<p>Table IV Drawing 2 & 3</p> <p>Drawing 5 Drawing 6</p> <p>Appendix A Scale of Measurement</p>	<p>supplier added. Was removed. Measurements for hook & loop tape for shoulder strap added for short, regular and tall. Added Pen/Pencil Loop. Loop tape attachment strap measurement changed and added elastic to the attachment strap. Added pattern piece for pen/pencil loop. Modified scale of measurements.</p>
2014-02-11	<p>Appendix B Para. 5 Para. 5, 6, & 7</p>	<p>Removed Delivery, Packing and Marking of Containers removed Renumbered</p>
2014-05-21	<p>Para. 4.1.8 Para. 4.3.2.1 Para. 4.3.2.3</p> <p>Para. 4.3.2.4</p> <p>Drawing # 2 Drawing # 3</p>	<p>5" elastic width added Attachment strap measurement changed Loop tape measurement adjusted and the attachment strap measurement Elastic, loop tape and hook tape measurements adjusted for sizes 32-34 Short and 36-38 Short Sizes changed for flap measurement Loop tape, hook tape and waist strap measurements adjusted for sizes 32-34 Short and 36-38 Short</p>
2014-05-26	<p>Para. 3.2 Para. 3.3 Para. 4.1.4 Para. 4.3.2.3</p>	<p>Added the word 'design' to option 1 & 2 Removed Product manufacturer changed Added the word 'design' to option 1 & 2</p>

RCMP VIEWING SAMPLE

A viewing sample, when available, will be supplied to the successful tenderer.

This will be used for the guidance of the manufacturer in all factors not covered by this specification or referred to therein. Variation from the specification may appear in the sample in which case the specification shall govern.

It may be obtained from:

Royal Canadian Mounted Police
ATTN: Uniform & Equipment Program
(440 Coventry Road, Warehouse Building)
1200 Vanier Parkway
Ottawa, Ontario
K1A 0R2

It will be sent “prepaid” and is to be returned “prepaid”.

The viewing sample shall be returned to the RCMP in the same condition as received by the manufacturer. Lost or damaged viewing samples shall be replaced by an identical item or the RCMP shall be reimbursed for the cost of an acceptable replacement.

SPECIFICATION**CARRIER, EXTERNAL, LOAD CARRYING****1. Definition**

- 1.1 This specification shall govern the manufacture and inspection of Carrier, External, Load Carrying.
- 1.2 This specification, patterns, viewing sample, drawing or other information issued in connection therewith, may only be used for specific enquiries, tenders, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for R.C.M.P. Carrier, External, Load Carrying.

2. Applicable Specifications

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the invitation to tender, unless otherwise specified.
- 2.2 CAN/CGSB 4.2 Textile Test Methods.
- 2.3 CAN/CGSB 4.131-93, Thread, Polyester.
- 2.4 CAN/CGSB 86.1-2003 Care Labeling of Textiles.
- 2.5 ASTM, American Society for Testing and Materials, Method D3787, D3776, D1777, D3786 and D4966.
- 2.6 AATCC-100 American Association of Textile Chemists and Colorists - Technical Manual.
- 2.7 FED-STD191-5206, Federal Standard, Textile Test Methods.
- 2.8 ISO 105, ISO 4920, ISO 6330, ISO 7211-2, ISO 11092, ISO 13937-1, International Standards Organization.
- 2.9 RCMP, G.S.1045-177 Vest, Soft Body Armour.
- 2.10 CAN/CGSB 4-GP-85Ma, Thread, Nylon.

3. **General Requirements**

- 3.1 The article or material covered by this specification shall be free from imperfections or blemishes such as may affect its appearance or serviceability. In all particulars not covered by this specification or contract documents, production shall be equivalent in all respects to the viewing sample.
- 3.2 **Design** - Carrier, External, Load Carrying to this specification shall be a vest-like, garment which will be used to carry RCMP issue ballistic body armour panels as specified in Para. 2.9. The carrier will enable the user to wear Soft Body Armour over a shirt. The carrier will be dark blue in colour with encapsulated elastic waist strap with front closure and adjustable shoulder straps. Included are two side pockets, one chest front pocket and permanent POLICE identification markings, and accessory pouch attachment webbing in **Design Option 1**, front only and in **Design Option 2** front and back.

Note: There will be no side pockets on all short sizes due to lack of available landscape.

4. **Detail Requirements**

4.1 **Material**

- 4.1.1 **Shell Material** – The shell material shall be a dark navy ripstop fabric meeting the requirements outlined in Table I.
See Table I for required documentation.
- 4.1.2 **Lining Material, Mesh** – The mesh lining shall be a black material, meeting the requirements of Table II.
See Table II for required documentation.
- 4.1.3 **Lining Material, Wicking/Moisture dissipating** – The lining material shall be a dark navy or black material meeting the requirements outlined in Table III.
See Table III for required documentation.
- 4.1.4 **Webbing, Accessory & Microphone Strap** – The webbing shall be a durable nylon webbing, luggage quality, black in colour measuring 2.54 cm (1 inch) wide and .04”± .01” thick. It shall be solution dyed nylon having a minimum tensile strength of 1600 lbf. and be equal in all respects to the viewing sample. Texfast #N0015S from Tape Craft is known to meet the requirements.
Certification of compliance must be provided.
- 4.1.5 **Thread**
- 4.1.5.1 **Seam and Stitching Thread** - Shall be polyester wrap, polyester core, Tex 50, Class B, Type I of matching shade to the shell material, meeting CAN/CGSB 4.131-93.

Certification of compliance must be provided.

- 4.1.5.2 **Reinforce Stitching Thread** - Shall be a nylon continuous filament bonded, Class A, Type II, Tex 45, meeting CAN/CGSB 4-GP-85Ma. It shall be black in colour.

Certification of compliance must be provided.

- 4.1.6 **Hook and Loop Tape** - Shall be woven nylon, black in colour, with a high life cycle. The combined hook and loop shall have no less than (8) P.S.I length-wise shear strength. The initial peel strength shall not be less than 1 P.I.W. and after 1000 cycles shall be not less than .5 P.I.W. with a minimum lengthwise shear of 4 P.S.I. Dimensions shall be as per drawings and pattern template.

Certification of compliance must be provided.

- 4.1.7 **Slider Fastener**

- 4.1.7.1 **Horizontal Chest Pocket** – Shall be a 2-way closed end slide fastener, black in colour with auto-locking sliders, two arranged in a head to head relation and one opening from the left and one opening from the right. YKK CIFMC 59 DSYG C5 BTM 2 H-H (only) 24 cm (9½”) in length (only).

Certification of compliance must be provided.

- 4.1.7.2 **Side Pockets** – They shall be one way closed end fastener with an auto-locking slider, black in colour. YKK #12960 C1FC 59 DS6YG C5 5/8, length 13 cm (5”) (only).

Certification of compliance must be provided.

- 4.1.7.3 **Interior Access Panel** – Shall be a 1-way closed end slide fastener, black in colour with an auto-locking slider. YKK 5CI 5/8 CHAIN DSB C5 SLIDER (only). See sizing chart below.

Certification of compliance must be provided.

Size 32-34	13" (33 cm)
Size 36-38	15" (38 cm)
Size 40-42	17" (43 cm)
Size 44-46	19" (48 cm)
Size 48-50	21" (53 cm)

- 4.1.8 **Elastic, Waist Strap & Attachment Strap**– The waist strap shall be heavy duty nylon elastic, black in colour, 15 cm (6") or 12.5cm (5") wide as specified with maximum elongation of 130% and recovery as per viewing sample. There shall be 2 layers of this elastic. The attachment strap shall be heavy duty nylon elastic, black in colour, 2.54 cm (2") wide with maximum elongation of 130 % and recovery as per viewing sample.
- 4.1.9 **Binding Tape** – Shall be heavy duty nylon grosgrain binding tape, black in colour 2.54 cm wide, 0.3 mm thickness, and be equal in all respects to viewing sample.
Certification of compliance must be provided.
- 4.1.10 **Neoprene Padding** – The neoprene padding shall be made of 100% Nylon on the outer surface and 10% Nylon/ 90% Neoprene as the inner content. It shall be 725 g/m² ± 25g/m², 2.5 mm thick, black in colour and be equal in all respects to viewing sample.
Certification of compliance must be provided.
- 4.1.11 **Fusing** – Care shall be taken to ensure that the fusible interlining after application to the shell material shrink no more than the predicted shrinkage of the shell material. The fusible interlining shall have polyamide or a polyamide blend resin constructed in a dot pattern and sufficient in concentration for no delamination to occur after home laundering. The fusing procedures shall be those recommended by the fusible interlining supplier. The fusible interlining shall be plain weave, 100% cotton with a mass of 150 g/m² ± 8 g/m². It shall be black in colour and meet all requirements outlined above, and be equal in all respects to viewing sample.
Certification of compliance must be provided.
- 4.2 **Size and Dimensions** – Carrier, External, Load Carrying shall be supplied in the sizes specified by the RCMP and to the dimensions given in the scale of measurements and drawings forming part of this specification. The garment components shall be shaped, dimensioned and positioned in accordance with the pattern components and pattern requirements as outlined in Appendix A forming part of this specification.
- 4.3 **Construction**

4.3.1 **Stitching** - All stitching shall be lockstitch. There shall be not less than three nor more than four stitches per centimeter. The beginning and ending of all stitching shall be securely backstitch tacked, unless secured by other stitching.

4.3.2 **Body**

4.3.2.1 **Front Pouch** - The front pouch shall be made from the shell material specified in Para. 4.1.1, lined with the material specified in Para. 4.1.2 and 4.1.3, and shall be sized and shaped to the pattern and the scale of measurements. Shoulder strap portions shall extend over the shoulder in accordance with the drawings and pattern pieces. Each shoulder strap portion shall have hook tape for shoulder closure and adjustment on the front side of the carrier. Hook tape shall be placed on the face of the shell material at the shoulder edge as per drawing #2. The name tag shall be loop tape 8.5cm long by 2.5cm wide and positioned on right front as per patterns and drawing # 2.

The front of the external carriers shall have one large chest pocket with a horizontal opening, secured by the slide fastener specified in Para. 4.1.7.1, pocket depth to be 16 cm. Inside the chest pocket shall be a notebook pocket, dimensioned in accordance with drawing #5 and pattern template, alongside a pen/pencil pocket, with an opening of 3.5 cm and 16 cm deep. An additional horizontal pen/pencil loop shall be placed at the slide fastener opening as per drawing # 5. The front shall have two side pockets, openings of 13 cm minimum, closed by the slide fastener specified in Para. 4.1.7.2.

The lower front portion of the pouch shall have one piece of loop tape sewn on the center front, measuring 15 cm (6") deep and width dimensioned as per pattern template. This loop tape shall be positioned 2 cm above bottom edge, centered on front. The front flap shall be reinforced with a fused piece of shell material as specified in Para 4.1.1 and 4.1.11. It shall be fixed to the inside flap and continue the full length and width of flap. The front flap shall have 2 pieces of hook tape 15 cm (6") deep and width dimensioned as per pattern template, placed on the underside of flap, positioned according to drawing #2. The front flap shall have 3 rows of webbing as specified in Para. 4.1.4. Each row of webbing shall be secured with vertical rows of reinforced stitching at intervals of 3.8 cm (1.5") across flap through all layers as per pattern template and Drawing #2. The reinforced stitching shall be done using thread as specified in Para. 4.1.5.2. **Care shall be taken to ensure that there are no broken or dropped stitches when reinforced stitching is done to secure webbing. Care shall also be taken to ensure that the secured webbing does not pull or buckle.**

The inside of the front pouch shall be lined with two lining materials as specified in Para. 4.1.2 and 4.1.3. The upper shoulder portion shall be lined with mesh lining material as specified in Para. 4.1.2. The bottom edge of mesh lining shall be bound with the binding tape as specified in Para. 4.1.9 to ensure durability. The lower portion shall be lined with lining material as specified in Para. 4.1.3. The

inside of the pouch shall have zippered opening to allow the insertion of ballistic panel as per Drawing #2. The zipper for this pouch shall be as specified in Para. 4.1.7.3. Inside the top of pouch at shoulder level are loop attachment straps to hold the ballistic panel in place. The attachment straps shall measure 18 cm finished by 5 cm and be positioned as per viewing sample and Drawing #6. The upper part of the attachment strap shall be made from a durable elastic as specified in Para. 4.1.8 and shall measure 10 cm in length. The first 5 cm shall be stitched to the carrier and the other 5 cm shall hang attached to the loop tape for flexibility of attaching the ballistic panels.

- 4.3.2.2 **Removable Shoulder Padding** – There shall be a removable shoulder pad for each shoulder strap, 5 mm thick with ± 1 mm tolerance made from 2 layers of neoprene as specified in Para. 4.1.10 and covered with nylon fabric, black in colour. These shoulder paddings are to be inserted in front shoulder strap, between the shell and the mesh lining. It shall be sized as 4.8 cm wide by 21 cm long and be equal in all respects to viewing sample.
- 4.3.2.3 **Back**- The back pouch shall be made from shell material specified in Para. 4.1.1, lined with the material specified in Para. 4.1.2 and 4.1.3, and shall be sized and shaped to the pattern and the scale of measurements. Loop tape shall be applied to the body side of shoulder strap and measure as per Drawing #3. The loop tape shall be placed in line with the piece edge. There shall be webbing as specified in Para. 4.1.4 sewn on top side of shoulder strap 1.25 cm from the edge. It shall be 6 cm long to fit across shoulder strap and sewn at each edge to create a loop. The inside of the back pouch shall be lined with two lining materials as specified in Para. 4.1.2 and 4.1.3. The upper shoulder portion shall be lined with mesh lining material as specified in Para. 4.1.2. The bottom edge of mesh lining shall be bound with the binding tape as specified in Para. 4.1.9 to ensure durability. The lower portion shall be lined with lining material as specified in Para. 4.1.3. The inside of the pouch shall have zippered opening to allow the insertion of ballistic panel as per Drawing #3. The zipper for this pouch shall be as specified in Para. 4.1.7.3. Inside the top of pouch at shoulder level are loop attachment straps to hold the ballistic panel in place. The attachment straps shall measure 18 cm finished by 5 cm and be positioned as per viewing sample and Drawing #6. The upper part of the attachment strap shall be made from a durable elastic as specified in Para. 4.1.8 and shall measure 10 cm in length. The first 5 cm shall be stitched to the carrier and the other 5 cm shall hang attached to the loop tape for flexibility of attaching the ballistic panels.

Design Option 1 - There shall be no webbing across the back of the carrier.

Design Option 2 - There shall be 3 rows of webbing as specified in Para. 4.1.4. Each row of webbing shall be secured with vertical rows of reinforced stitching at intervals of 3.8 cm (1.5”) across the full width of the back. The reinforced stitching shall be done using thread as specified in Para. 4.1.5.2. **Care shall be taken to ensure that there are no broken or dropped stitches when reinforced**

stitching is done to secure webbing. Care shall also be taken to ensure that the secured webbing does not pull or buckle.

Each row of webbing shall be positioned as per viewing sample and pattern.

- 4.3.2.4 **Waist Strap** - The waist strap shall be made from material specified in Para. 4.1.1 and 2 layers of elastic as specified in Para. 4.1.8. The strap shall be sized and shaped to the pattern. The 2 layers of elastic shall be encapsulated with material specified in Para. 4.1.1 and joined to the side seam of back panel on one side and to the waist strap on the other side, as per drawing #3. This elastic is to be 6 cm wide and 15 cm (6") long for all sizes except 32-34 Short and 36-38 Short and be completely enclosed. Sizes 32-34 Short and 36-38 Short will be 6 cm wide and 12.5 cm (5") long. There shall be loop tape as specified in Para 4.1.6 sewn on front of waist strap. The total measurement of the loop tape shall be 20 cm wide by 16 cm long for all sizes except 32-34 Short and 36-38 Short. Sizes 32-34 Short and 36-38 Short will be 20 cm wide by 13 cm long. There shall also be loop tape measuring 2 cm by 15 cm for all sizes except 32-34 Short and 36-38 Short sewn to the single top layer of the encapsulated elastic close to front side of waist strap. Sizes 32-34 Short and 36-38 Short will be 2 cm by 12.5 cm. There shall be hook tape as specified in Para 4.1.6 sewn on back of waist strap. The total measurement of the hook tape shall be 20 cm wide by 16 cm long for all sizes except 32-34 Short and 36-38 Short. Sizes 32-34 Short and 36-38 Short will be 20 cm wide by 13 cm long. Refer to Drawing #3, inner view and viewing sample. This strap shall be sandwiched between front and front flap for closure. Refer to Drawing #1.
- 4.3.2.5 **'POLICE' Markings** - The front and rear portions of the external carrier shall have permanent POLICE marking either silkscreened or heat-applied, Arial font, size and shape as indicated in the drawings and the viewing sample. Letter colour shall be White, equal to the viewing sample. This marking shall be able to withstand normal washing and drying without degradation of the colour or permanency. There shall be no loose or unbonded edges or corners.
- 4.4 **Sizes and Patterns** - There are fifteen standard sizes as follows:

32 - 34 S	32 - 34 R	32 - 34 T
36 - 38 S	36 - 38 R	36 - 38 T
40 - 42 S	40 - 42 R	40 - 42 T
44 - 46 S	44 - 46 R	44 - 46 T
48 - 50 S	48 - 50 R	48 - 50 T

RCMP patterns are available for these sizes. Special sizes will be manufactured to individual dimensions as required. **Note: There will be no side pockets on all short sizes due to lack of available landscape.**

- 4.5 **Marking & Cleaning Instructions Label** - Each vest shall have a label marked legibly and indelibly in English and French attached in accordance with the requirements outlined below. All information shall appear according to the CAN/CGSB 86.1-2003 Care Labeling of Textiles. The label shall be placed at the bottom of the back panel on the left side as per drawing #3. Where the word ‘insert’ appears, enter only the information requested. (Example: *Insert: Size/Taille*, enter 40-42).

RCMP # : <i>(insert)</i>	
Size: <i>(insert)</i>	
Date of manufacture, in numeric format year/month (Ex. 2001 / 11)	
Manufacturer's identification (Company name or number).	
RCMP Carrier, External, Load Carrying	Gilet pare-balles extérieur de transport de charges GRC
Machine wash – cool (30°C)	Laver à la machine – eau froide (30°C)
Do not use fabric softener or chlorine bleach	Ne pas utiliser d'agent adoucissant ni d'agent de blanchiment
Tumble dry- low (Do not use dryer sheets)	Séchage par culbutage – à basse température (Ne pas utiliser d'assouplissant en feuilles)
Steam iron - medium	Repassage à vapeur – à température moyenne
Do not dry clean	Ne pas nettoyer à sec

- 4.6 **Identification Label** - Each vest shall have a durable blank label 2 cm x 7.5 cm applied separately above or beside the marking and cleaning label used for the inscription of the wearers' name.

5. **Quality Assurance Provisions**

- 5.1 **Responsibility for Inspection** - Unless otherwise stipulated in the contract, it is the prime contractor's responsibility to satisfy the R.C.M.P., Uniform & Equipment Program that the material and services being supplied conform to this specification. This may be accomplished by performing the tests specified in this specification or by demonstrating to the satisfaction of the R.C.M.P., Uniform & Equipment Program that conformity to this specification of manufacturing processes is assured. The contractor may use any commercial testing establishment acceptable to the R.C.M.P., Uniform & Equipment Program.
- 5.2 The R.C.M.P., Uniform & Equipment Program reserves the right to perform any inspection considered necessary to ensure the material and services conform to the specified requirements. For the purpose of inspection, a portion of each delivery not exceeding two percent or two out of any number delivered under 100 may be put to tests that could destroy the articles. If found to be inferior or not in

accordance with this specification, all articles so destroyed shall be replaced by others of proper quality and pattern at the expense of the contractor. The entire delivery may also be rejected if it is found that articles previously rejected due to non-repairable defects are redelivered for inspection.

- 5.3 The contractor will be promptly notified when any articles are not accepted and such articles will be returned at the contractor's risk and expense.

6. **Methods of Measuring**

(Refer to the Scale of Measurements and Drawing No. 4).

- 6.1 **Center Front Length** – The length shall be the distance measured from the base of the neckline at front to the hem. (A).
- 6.2 **Front Hem** – The hem shall be the distance across the vest bottom. (B).
- 6.3 **Front Width at Chest Pocket** – The width shall be measured across front at level of front chest pocket. (C).
- 6.4 **Front Side Wing Height** – The width shall be measured top to bottom of side wing. (D).
- 6.5 **Center Back Length** – The length shall be the distance measured from the base of the neckline at center back to the hem. (E).
- 6.6 **Back Hem** – The hem shall be the distance across the vest bottom of the vest and excluding the waist strap. (F).
- 6.7 **Back Width** – The width shall be measured across back at level of braid between mesh and lining material. (G).
- 6.8 **Back Side Wing Height** – The width shall be measured top to bottom of side wing. (H).

TABLE I
Shell Material

REQUIREMENT			TEST METHODS
1	Colour	Dark Navy, to match swatch available from RCMP Uniform & Equipment Program	
2	Fibre Content	65% Polyester 35% Cotton	CAN/CGSB-4.2 Method 14-2005
3	Weave	Ripstop	Visual
4	Width	163 cm (min.)	
5	Mass	290 g/m ² ± 14g/m ²	CAN/CGSB-4.2 Method 5.1 ASTM D-3776
6	Yarns per cm	Warp: 42 min. Weft: 18 min.	CAN/CGSB-4.2 Method 6-M89 ISO 7211-2
7	Breaking Strength - Grab Method	Warp: 1000 Newtons min Weft: 550 Newtons min	CAN/CGSB-4.2 Method 9.2-M90 (2004)
8	Tearing Strength - Rip Method	Warp: 45 Newtons min Weft: 25 Newtons min	CAN/CGSB-4.2 Method 12.1-M90
9	Abrasion Resistance - Martindale Method Part 2 (Determination of Specimen Breakdown)	No breakdown after 30,000 at 9 kPa	ASTM D-4966
10	Dimensional Change in Domestic Laundering (cool wash 40°C)	Warp: 2% max Weft: 2% max	CAN/CGSB-4.2 Method 58
11	Resistance to Surface Wetting - Spray Method	100 initial 90 after 5 washes or better	CAN/CGSB-4.2 Method 26.2 ISO 4920
12	Colourfastness - To Light	Equal to AATCC Standard L6 or better	CAN/CGSB-4.2 Method 18.3 ISO 105-B02
13	Colourfastness - To Crocking	Dry: Grade 4 or better Wet: Grade 3 or better	CAN/CGSB-4.2 Method 22 ISO 105-C01
14	Colourfastness - To Perspiration	Grade 4 or better	CAN/CGSB-4.2 Method 23 ISO 105-E-04
15	Colourfastness - To Laundering (cool wash 40°C)	Grade 4 or better	CAN/CGSB-4.2 Method 19.1

A certificate of compliance is required when Doubletex “Panamera” SD35S in colour #28606Y Dark Navy is submitted for the requirement. Other manufacturers’ fabrics shall be acceptable provided they meet or exceed the requirements and provide test data for Table I excluding requirements 1, 3 and 4.

TABLE II
Mesh Lining Material

REQUIREMENT			TEST METHODS
1	Colour	Black	
2	Fibre Content	100% Polyester	CAN/CGSB-4.2 Method 14-2005
3	Knit	Spacer Mesh	Visual
4	Width	152 cm (min.)	
5	Mass	275 g/m ² ± 14g/m ²	CAN/CGSB-4.2 Method 5.1-M90 (2004), or ASTM D-3776
6	Yarns per cm	Wales: 10 ± 3 Courses: 22 ± 3	CAN/CGSB-4.2 Method 7- M88 (2001) ISO 7211-2
7	Instron Ball Burst (psi)	130 min	ASTM D-3787-07 (2011)
8	Dimensional Change in Domestic Laundering (cool wash 40°C)	Warp: 2% max Weft: 2% max	CAN/CGSB-4.2 Method 58-2004
9	Wicking Treatment	Warp: 47 sec/in (max) Weft: 60 sec/in (max)	INDA IST 10.1 (95)
10	Antimicrobial Treatment Tested for s. aureus, e. coli, k. pneumonia	70% killed within 1 hour 99% killed within 24 hours	AATCC 100-2004
11	Thickness	2 mm ± 0.5mm	ASTM D-1777

Test reports are required for the requirements in Table II excluding requirements 1, 3 and 4.

TABLE III
Lining Material

REQUIREMENT			TEST METHODS
1	Colour	Dark Navy (to match swatch available from RCMP Uniform & Equipment Program) or Black	
2	Fibre Content	100% Polyester 70 denier (min.)	CAN/CGSB-4.2 Method 14-2005
3	Knit	Warp Knit (pique)	Visual
4	Width	152 cm (min.)	
5	Mass	144 g/m ² ± 7g/m ²	CAN/CGSB-4.2 Method 5.1 ASTM D-3776
6	Yarns per cm	Wales: 14.6 ± 3 Courses: 14.2 ± 3	CAN/CGSB-4.2 Method 7-M88 (2001) ISO 7211-2
7	Mullen Burst (psi)	160 min	ASTM D-3786/D3786M-13
8	Dimensional Change in Domestic Laundering (cool wash 40°C)	Warp: 2% (max) Weft: 2% (max)	CAN/CGSB-4.2 Method 58-2004
9	Wicking Treatment	Warp: 35 sec/in (max) Weft: 45 sec/in (max)	INDA IST 10.1 (95), par. 10
10	Antimicrobial Treatment Tested for s. aureus, e. coli, k. pneumonia	70% killed within 1 hour 99% killed within 24 hours	AATCC 100-2004
11	Colourfastness - To Crocking	Dry: Grade 4 or better Wet: Grade 4 or better	CAN/CGSB-4.2 Method 22-2004 ISO 105-C01
12	Colourfastness - To Laundering (cool wash 40°C)	Grade 4 or better	CAN/CGSB-4.2 Method 19.1-2004

A certificate of compliance is required when Rentex Mills “Micro Polyester” R5281T is submitted for the requirement. Other manufacturers’ fabrics shall be acceptable provided they meet or exceed the requirements and provide test data for Table III excluding requirements 1, 3 and 4.

APPENDIX A

Sealed Pattern Identifier

Pattern #: G.S. 1045-360
 Title: Carrier, External, Load Carrying

Paper Patterns - Paper patterns are available from the RCMP, Uniform & Equipment Program, Ottawa Ontario, under Pattern # G.S. 1045-360. Firms requested to produce Pre-contract Award Samples will be provided with the base pattern only. The full set of patterns either in individual sizes or as a graded nest will be provided to the successful bidder after the contract is awarded.

The paper patterns include placement some templates for hook and loop and retro reflective material. Contractors may make changes required to suit their production process, however, the design and grade shall not be affected or changed. No seam allowance is required.

All patterns are the property of the RCMP and must be returned upon completion of the contract.

Pattern Pieces - This design has 24 pattern components.

Legend:

Cut 1 Single = Cut 1

Cut 1 Paired = Cut 2

Pattern Components	Nomenclature	Quantity to be cut	Material
# 1 of 24	Back	1 Single	Shell Material
# 2 of 24	Front	1 Single	Shell Material
# 3a of 24	Front Flap (Size 32-34)	1 Single	Shell Material
# 3b of 24	Front Flap (Size 36-38)	1 Single	Shell Material
# 3c of 24	Front Flap (Size 40-42)	1 Single	Shell Material
# 3d of 24	Front Flap (Size 44-46)	1 Single	Shell Material
# 3e of 24	Front Flap (Size 48-50)	1 Single	Shell Material
# 4a of 24	Flap Reinforcement (32-34)	1 Single	Shell Material
# 4b of 24	Flap Reinforcement (36-38)	1 Single	Shell Material
# 4c of 24	Flap Reinforcement (40-42)	1 Single	Shell Material
# 4d of 24	Flap Reinforcement (44-46)	1 Single	Shell Material
# 4e of 24	Flap Reinforcement (48-50)	1 Single	Shell Material

# 5 of 24	Top Welt	1 Single	Shell Material
# 6 of 24	Pocket Welt	1 Paired	Shell Material
# 7 of 24	Pocket Bag - Side	1 Paired	Shell Material
# 8 of 24	Pocket- Notebook/w pen slot	1 Single	Shell Material
# 9 of 24	Side Flap Loop	1 Paired	Shell Material
# 10 of 24	Side Flap Hook	1 Paired	Shell Material
# 11 of 24	Front Shell Pocket	1 Single	Shell Material
# 12 of 24	Front Shell Pocket Facing	1 Single	Shell Material
# 13 of 24	Side Elastic Cover	1 Paired	Shell Material
# 14 of 24	Pen/Pencil Loop	1 Single	Shell Material
# 15 of 24	Back – Lower Lining	1 Single	Lining Material
# 16 of 24	Back – Upper Lining	1 Single	Lining Material
# 17 of 24	Front – Lower Lining	1 Single	Lining Material
# 18 of 24	Front – Upper Lining	1 Single	Lining Material
# 19 of 24	Zip Ends	2 Paired	Lining Material
# 20 of 24	Back – Upper Mesh	1 Single	Mesh Material
# 21 of 24	Front – Upper Mesh	1 Single	Mesh Material
# 22a of 24	Flap Reinforcement (32-34)	1 Single	Fusing
# 22b of 24	Flap Reinforcement (36-38)	1 Single	Fusing
# 22c of 24	Flap Reinforcement (40-42)	1 Single	Fusing
# 22d of 24	Flap Reinforcement (44-46)	1 Single	Fusing
# 22e of 24	Flap Reinforcement (48-50)	1 Single	Fusing
# 23 of 24	Shoulder Padding	2 Paired	Neoprene
# 24 of 24	Shoulder Padding - Lining	2 Paired	Nylon Lining

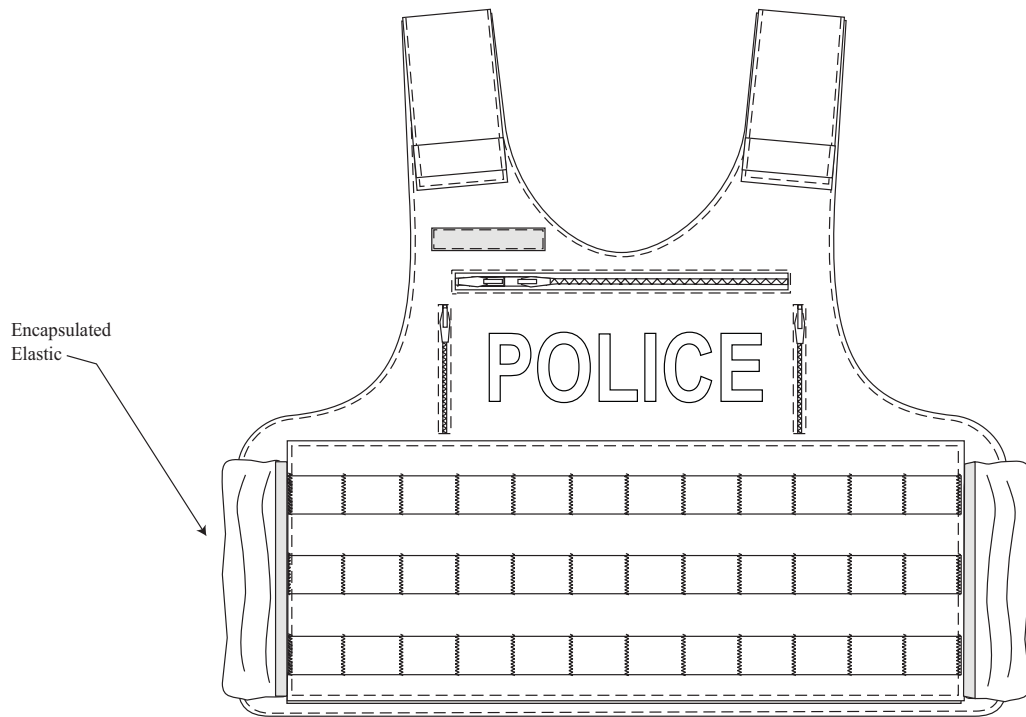
Note: Pattern piece for edge binding not included.

Scale of Measurements – Carriers, External, Load Carrying

Size	GARMENT MEASUREMENT							
Size	Center Front Length	Front Hem	Front Width at Chest Pocket	Front Side Wing Height	Center Back Length	Back Hem	Back Width at Braid	Back Side Wing Height
32 - 34 S	32.6	42.75	27.5	19.75	36.4	42.75	27.75	19.75
36 - 38 S	33.2	47.75	29.25	19.75	37	47.75	29.5	19.75
40 - 42 S	33.9	52.75	31	19.75	37.7	52.75	31.25	19.75
44 - 46 S	34.5	57.75	32.75	19.75	38.3	57.75	33	19.75
48 - 50 S	35.2	62.75	34.5	19.75	39	62.75	34.75	19.75
32 - 34 R	37.6	42.75	27.5	23.5	41.4	42.75	27.75	23.5
36 - 38 R	38.2	47.75	29.25	23.5	42	47.75	29.5	23.5
40 - 42 R	38.9	52.75	31	23.5	42.7	52.75	31.25	23.5
44 - 46 R	39.5	57.75	32.75	23.5	43.3	57.75	33	23.5
48 - 50 R	40.2	62.75	34.5	23.5	44	62.75	34.75	23.5
32 - 34 T	40.6	42.75	27.5	25.5	44.4	42.75	27.75	25.5
36 - 38 T	41.2	47.75	29.25	25.5	45	47.75	29.5	25.5
40 - 42 T	41.9	52.75	31	25.5	45.7	52.75	31.25	25.5
44 - 46 T	42.5	57.75	32.75	25.5	46.3	57.75	33	25.5
48 - 50 T	43.2	62.75	34.5	25.5	47	62.75	34.75	25.5
Tolerances ±	1 cm	1 cm	1 cm	1 cm	1 cm	1 cm	1 cm	1 cm
Measurement Location	A	B	C	D	E	F	G	H

NOTE: All measurements are in centimeters unless otherwise indicated.

Dwg. 1

Front ViewRear View

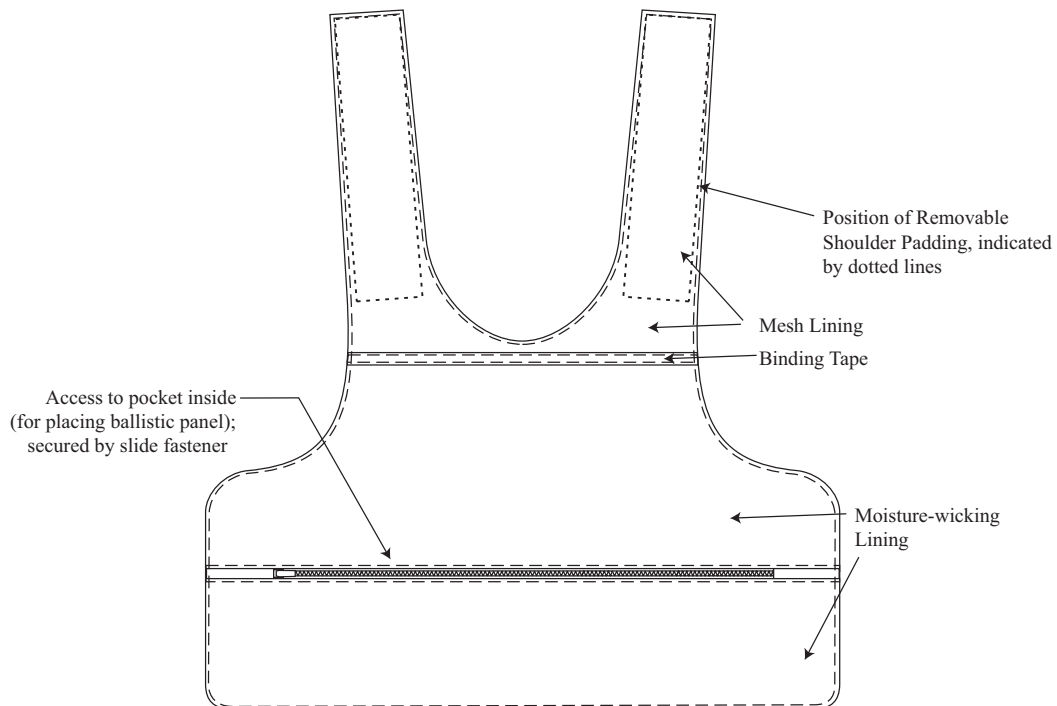
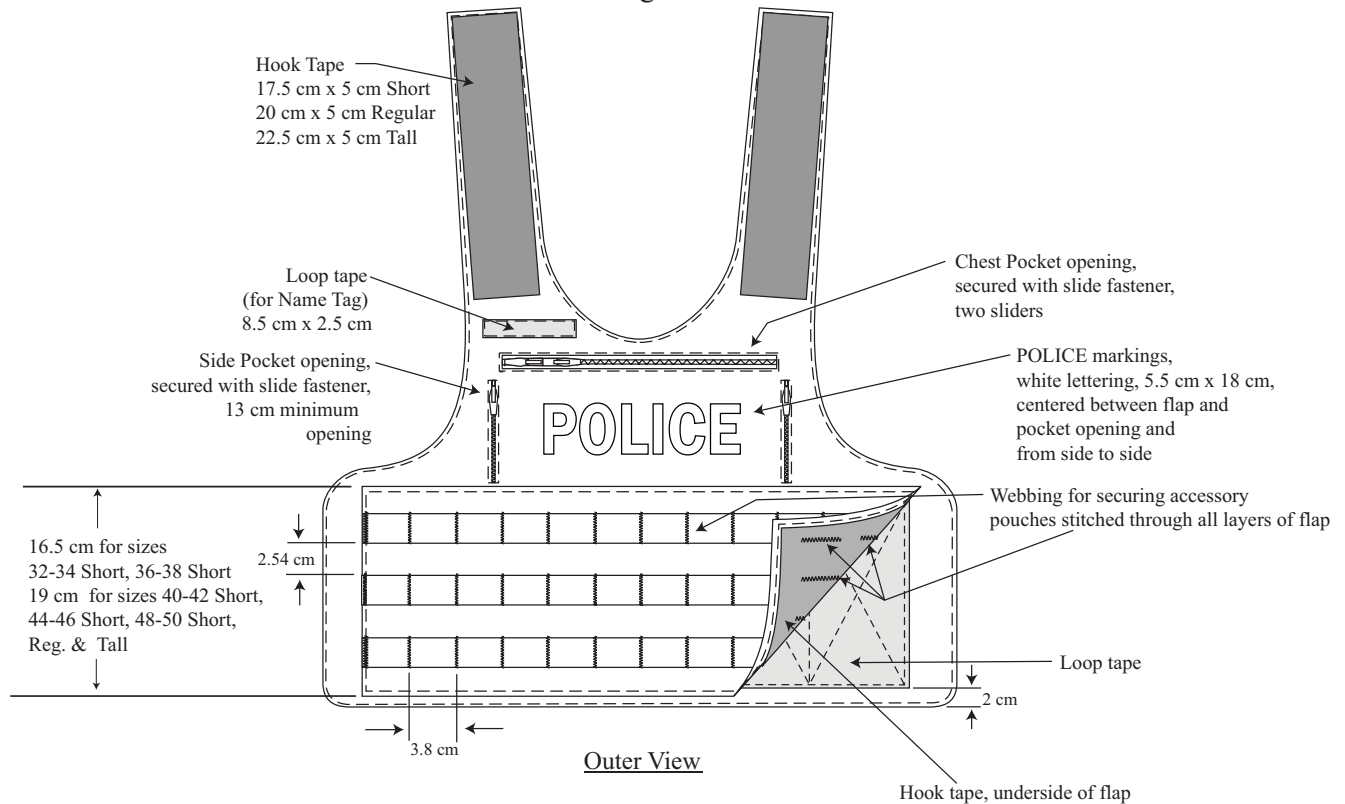
All Measurements in Centimeters

Unless otherwise stated all measurements are subject to ± 0.5 cm tolerances

NOT TO SCALE

Front Pouch

Dwg. 2



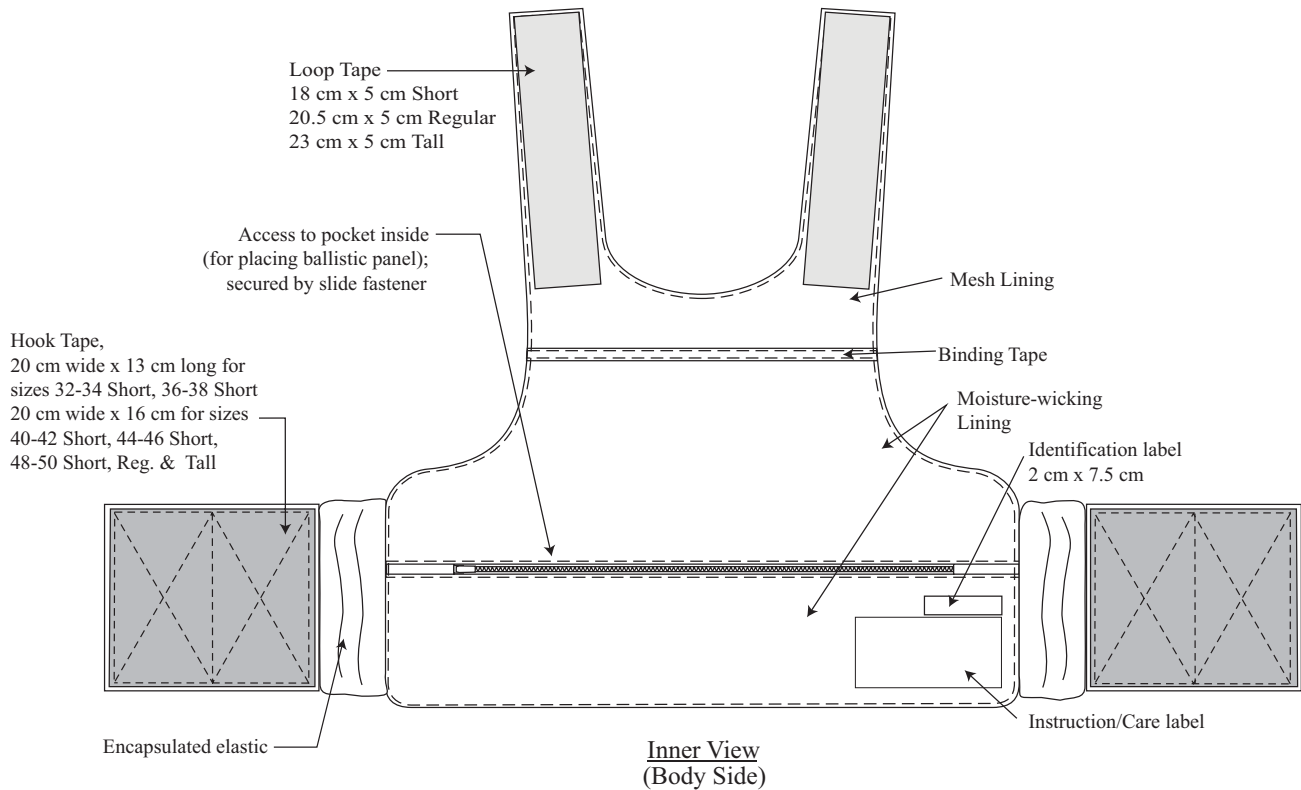
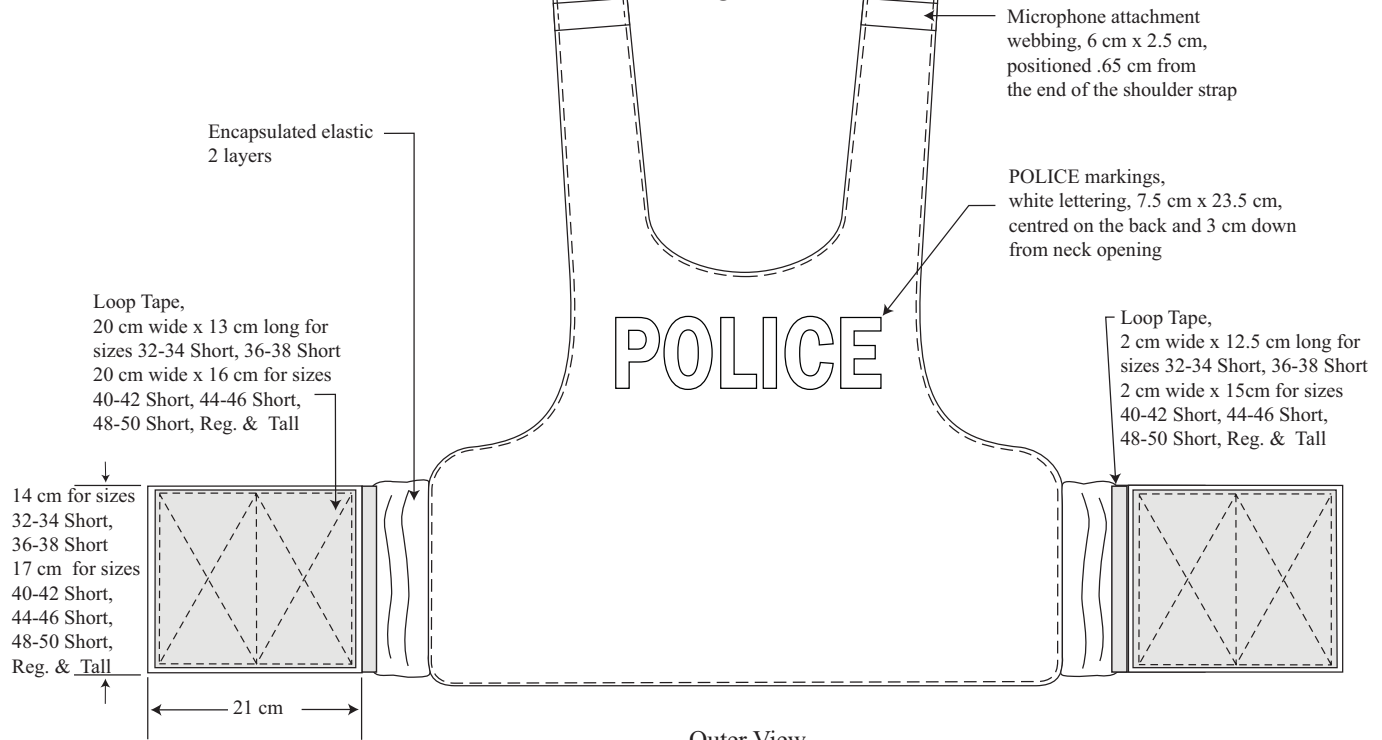
All Measurements in Centimeters

Unless otherwise stated all measurements are subject to ± 0.5 cm tolerances

NOT TO SCALE

Rear Pouch

Dwg. 3



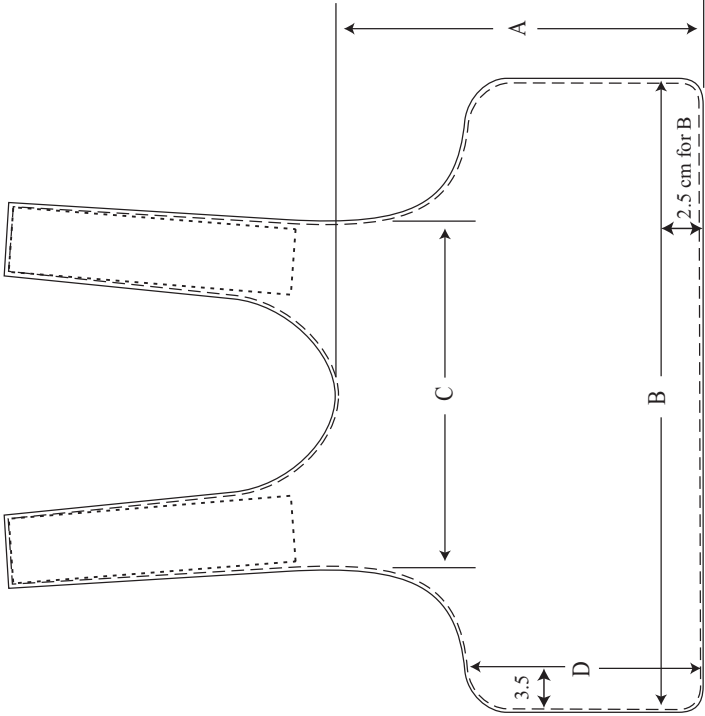
All Measurements in Centimeters

Unless otherwise stated all measurements are subject to ± 0.5 cm tolerances

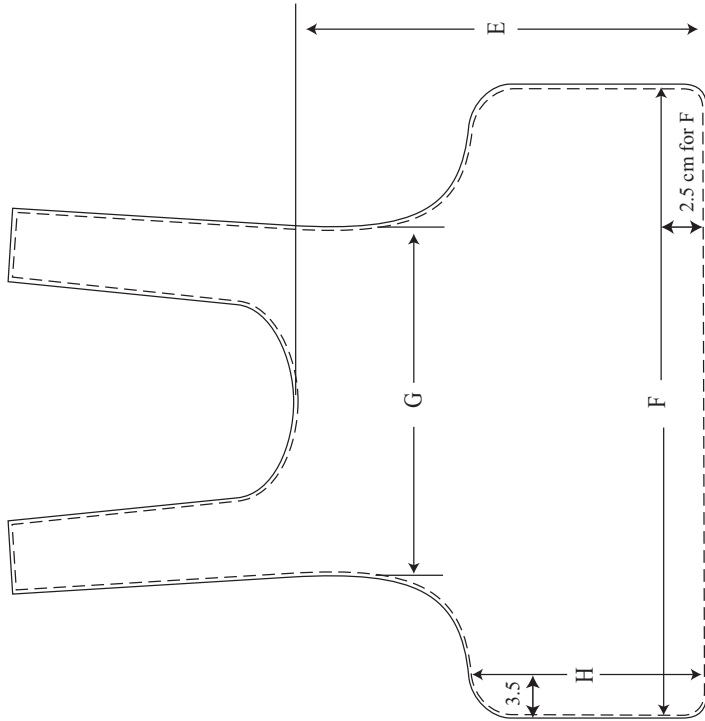
NOT TO SCALE

Measurement Location

Dwg. 4



Front Pouch, body side

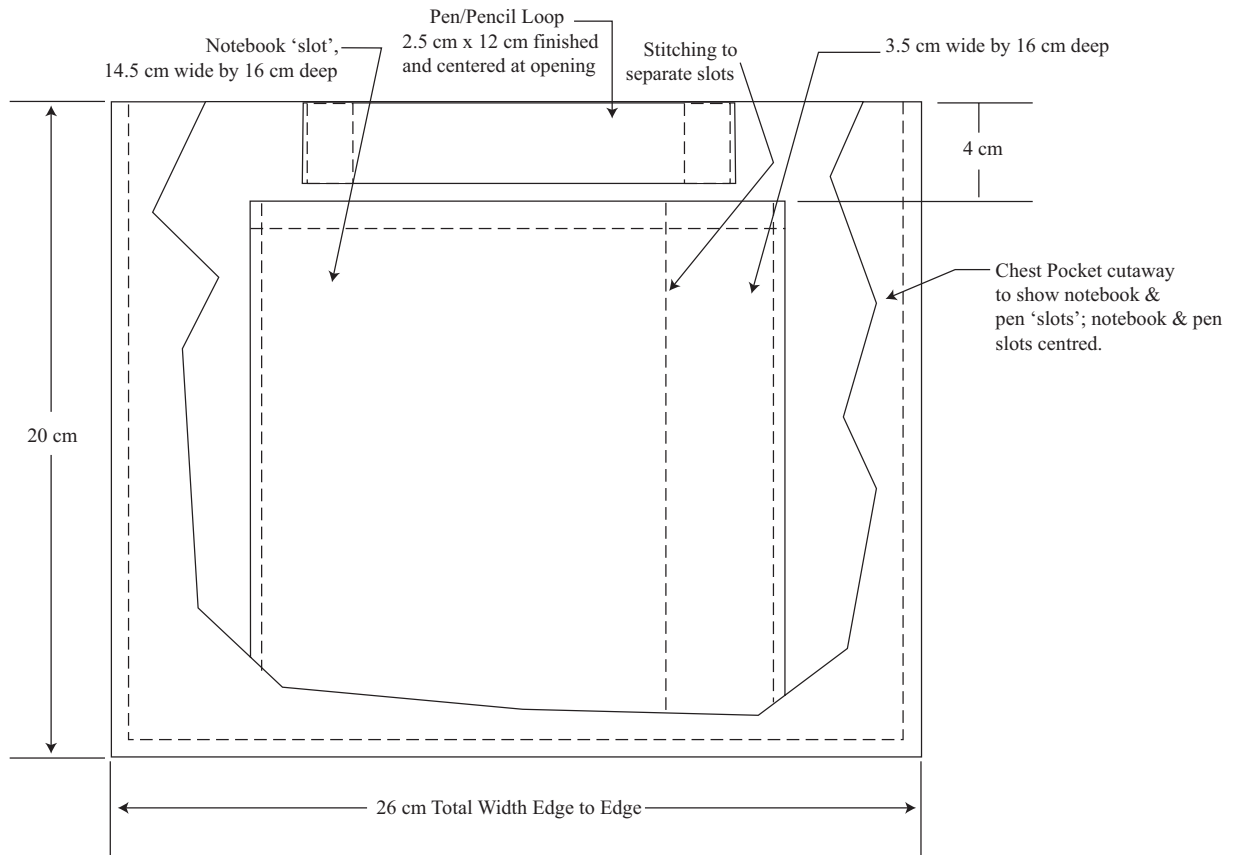
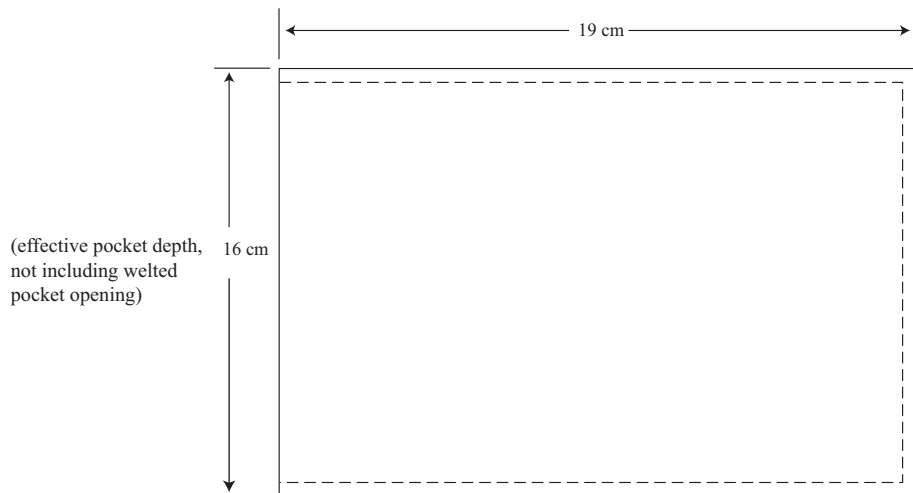


Rear Pouch, body side
(show without waist straps)

All Measurements in Centimeters
Unless otherwise stated all measurements are subject to ± 0.5 cm tolerances
NOT TO SCALE

Chest & Side Pocket Detail
(Welted Opening with Slide Fastener Closure not shown)

Dwg. 5

Chest PocketSide Pocket

(opening to the right in this drawing)

Note: 'Opening' edge of pocket to follow armhole line of carrier where pattern indicates.
Side Pockets will overlap inside carrier; to be attached together with a single row of stitching across top edge of overlap region.

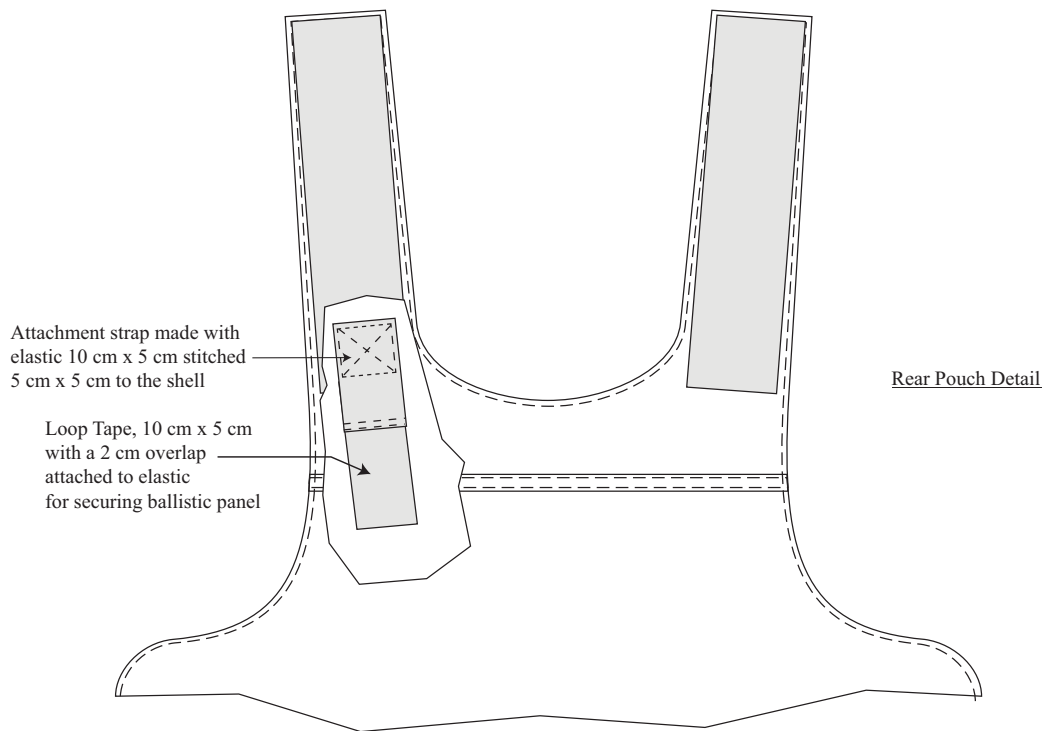
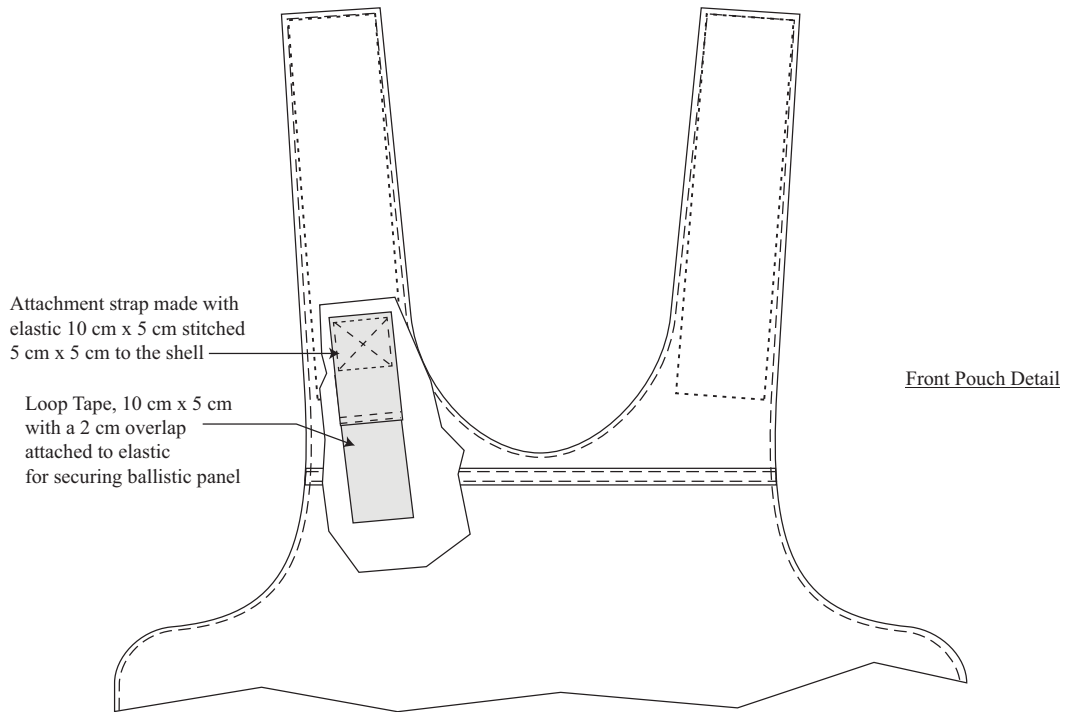
All Measurements in Centimeters

Unless otherwise stated all measurements are subject to ± 0.5 cm tolerances

NOT TO SCALE

Cutaway View, Front & Back Pouches, showing
Ballistic Panel Attachment Strap

Dwg. 6



All Measurements in Centimeters

Unless otherwise stated all measurements are subject to ± 0.5 cm tolerances

NOT TO SCALE



Royal Canadian Mounted Police
Gendarmerie royale du Canada

Doc. no: G.S. 1045-177

Date: 2014-03-28

Specification

Vest, Soft Body Armour

This document has 20 pages
including the drawings.

This document was created in
English.

The document is available in
English and French.

☒ English/Anglais
Français/French

The photograph on this page
is for reference only.

Modifications

Date	Para. No's	Modifications
2007-06-01		Original Specification
2007-07-19	Appendix B	Scale of Measurements, Front Panel, 44-46T, Dim. 'D'
2007-09-12	Para. 4.4.1.3 (new), Dwg. 1	Bottom stitching of panels added.
2007-12-10	Paras. 4.4.1.1, 4.4.3, 4.4.5, Dwgs. 1, 2	Stitched pouch seams replacing heat-sealed seam, label to be sewn on.
2013-09-25	Para. 2.2 Para. 2.4 Para. 2.5, 2.6 Para. 4.1.1 Para. 4.2.1, 4.2.2, 4.2.3, 4.2.4 Appendix 'C'	Old CGSB standard references replaced. Old CGSB standard reference deleted. Paragraphs renumbered. Label para. referenced in place of specification. Certifications of Compliance added Certification of Compliance and test requirements added.
2014-03-28	Title change Para. 1.2 Para. 2.3 Para. 2.6 Para. 3.2 Para. 4.1 Para. 4.1.1 Para. 4.2.1 Para. 4.2.2 Para. 4.2.3 Para. 4.2.4 Para. 4.3 Para. 4.4.1.1 Para. 4.4.1.2 (deleted) Para. 4.4.3 Para. 4.4.4 (deleted) Para. 4.4.4 (renumbered) Para. 4.4.4.1 Paras. 6.1, 6.1.1 – 6.1.5 Dwgs 1, 2, 3, 4 Appendix 'C'	'Male and Female' reference deleted. Wording amended. Thread changed to bonded nylon. ASTM test methods added. Waterproof pouch requirement added. Velocity tolerances added. Waterproof test added to exceptions Ballistic waterproof fabric option deleted; cloth information requirement moved to Para. 6.1.1. Pouch material amended. Hook requirement amended. Thread requirement. Pattern reference amended. Panel stitching detail clarified. Female pattern reference paragraph deleted. Pouch construction detail. Flexibility test requirement deleted. Label attachment and information amended. Serial numbering detail added. Production Lot testing requirements changed Stitching removed, outline of sealed edge added, panel detail added, label example modified. Certification of Compliance requirements amended.

RCMP VIEWING SAMPLE

A viewing sample, when available, will be supplied to the successful tenderer.

This will be used for the guidance of the manufacturer in all factors not covered by this specification or referred to therein. Variation from the specification may appear in the sample in which case the specification shall govern.

It may be obtained from:

Royal Canadian Mounted Police
ATTN: Uniform & Equipment Program
(440 Coventry Road, Warehouse Building)
1200 Vanier Parkway
Ottawa, Ontario
K1A 0R2

It will be sent “prepaid” and is to be returned “prepaid”.

The viewing sample shall be returned to the RCMP in the same condition as received by the manufacturer. Lost or damaged viewing samples shall be replaced by an identical item or the RCMP shall be reimbursed for the cost of an acceptable replacement.

SPECIFICATION

VEST, SOFT BODY ARMOUR

1. Definition

- 1.1 This specification shall govern the manufacture and inspection of Vest, Soft Body Armour.
- 1.2 This specification, pattern, drawings, viewing sample or other information issued in connection therewith, may only be used for specific enquiries, tenders, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for Vest, Soft Body Armour.

2. Applicable Specifications

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the invitation to tender, unless otherwise specified.
- 2.2 CAN/CGSB, 4.2 Textile Test Methods.
- 2.3 CAN/CGSB, 4-GP-85-Ma, Bonded Nylon.
- 2.4 NIJ Standard 0101.03, Ballistic Resistance of Police Body Armour.
- 2.5 U.S. Dept. of Defence, MIL-STD-662F - V₅₀ Ballistic Test for Armour.
- 2.6 ASTM Test Methods – E96, D3775, D3776, D5034, D2261, D5035, D751, D5169, D5170.

3. General Requirements

- 3.1 The article or material covered by this specification shall be free from imperfections or blemishes such as may affect its appearance or serviceability. In all particulars not covered by this specification or contract documents, production shall be equivalent in all respects to the viewing sample.
- 3.2 **Design** - Soft Body Armour to this specification shall consist of a set of front and back ballistic material panels each enclosed in a waterproof pouch, to be used

with either an internal or an external carrier (supplied separately). It will protect the user from handgun ammunition as specified.

3.3 In the event of any inconsistency in contract documents, specification, patterns, drawing, or viewing sample, the aforementioned shall prevail in the following order:

- (i) Contract
- (ii) Specification
- (iii) Pattern
- (iv) Drawing
- (v) Viewing Sample

4. **Detail Requirements**

4.1 **Protection Level (Ballistic Resistance)** - Each ballistic panel shall protect against the following bullets and all lesser threat levels;

- .357 Magnum, Jacketed Soft Point, 158 Grain, Velocity of 425 m/s, +15 m/s;
- 9 Millimetre, Full Metal Jacket, 116 Grain, IVI Brand, Velocity of 393 m/s, + 15 m/s,
- Backface Signature (BFS) - Maximum depth 44 Millimetres.

4.1.1 **Test Methods** - All ballistic panels tested shall be tested in accordance with the United States Department of Justice, National Institute of Justice NIJ Standard 0101.03 with the following exceptions;

- A) 9mm as per Para. 4.1 above,
- B) Ballistic Panels may be patted down between test rounds,
- C) Labeling as per para. 4.4.4 of this specification.
- D) No 'tapering' of ballistic layers towards panel edges is allowed as the vest must provide the same protection over the entire vest surface area.
- E) Waterproof testing as specified in paragraph 6.1.3 of this specification.

4.2 **Materials**

- 4.2.1 **Cloth, Ballistic Aramid** - Shall be constructed of Ballistic Aramid Yarn with a maximum size of 930 Decitex (840 Denier). Yarn produced under the trade names Kevlar or Twaron are acceptable. The cloth shall be natural in colour. The cloth shall be thoroughly scoured with not more than 0.7% residuals, shall not contain loading materials and shall be free from imperfections.

Certification of Compliance must be provided.

4.2.2 **Cloth, Pouch, Ballistic Panel**

The requirements for the waterproof pouch material are specified below:

Property	Requirement	Test Method
Colour	black	
Fibre	100% Nylon 200den	
MVT-B Upright	4.4 oz/yd ² [150 g/m ²] (max./24 hrs)	ASTM E96
Weight, laminated	5.5 oz/yd ² , +/- 1.0 oz/yd ² [186 g/m ² , +/- 34 g/m ²]	ASTM D3776
Tensile Strength (4"/10 cm)	Warp: 200 lbs (min.) [880 N] Fill: 150 lbs (min.) [660 N]	ASTM D5034
Tongue Tearing	Warp: 2.5 lbs (min.) [11 N] Fill: 2.0 lbs (min.) [8.8 N]	ASTM D2261
Break Away Adhesion	35 lbs/in (min.)	ASTM D5035
Hydrostatic Resistance	200 psi minimum to burst [1378 kPa]	ASTM D751

Certification of Compliance must be provided.

This fabric must be capable of forming a strong, durable, sealed and water-proof bond when suitable processes are applied to it (e.g. heat-sealing, thermo-welding, etc.).

- 4.2.3 **Hook Fastener** - The hook fastener shall be woven nylon, black in colour, with a high life cycle. Combined hook and loop shall have no less than 8 P.S.I. lengthwise shear strength (ASTM 5169). The initial peel strength shall have an average value of 0.75 P.I.W. (ASTM 5170). After 1000 cycles shall be not less than 0.5 P.I.W. with a minimum lengthwise shear of 4 P.S.I. It shall have adhesive backing, suitable for creating a permanent bond after heat-sealing or thermo welding processes are applied to it. Velcro Hook # 88 is known to meet these requirements.

Certification of Compliance must be provided.

- 4.2.4 **Thread** - The thread shall be bonded nylon, Tex 70, Class B, Type 2, white in colour, meeting CAN/CGSB 4-GP-85-Ma.

Certification of Compliance must be provided.

- 4.3 **Size and Dimensions** - The Vest, Soft Body Armour to this specification shall be supplied in the sizes specified by the RCMP and to the dimensions given in the scale of measurements and attached drawings forming part of this specification. The vest components shall be shaped, dimensioned and positioned in accordance with the pattern components and pattern requirements as outlined in Appendix 'A' forming part of this specification. Patterns for the ballistic panels will be supplied by the RCMP.

4.4 **Construction**

- 4.4.1 **Ballistic Panels** - The ballistic panels shall be shaped and dimensioned in accordance with the patterns and attached drawings. They shall be constructed using a number of unbonded layers of ballistic aramid cloth which shall not exceed a total weight of 5,060 g/m² (example: 22 layers @ 230 g/m² = 5,060 g/m²) and whose combined thickness including the pouch cloth shall not exceed 5.6 mm except female front panels.

- 4.4.1.1 **Panel Stitching** - The layers of the finished pad shall be held together by means of 5 cm long stitching through the ballistic material only, located 4 cm from the edge in the center bottom and through the ballistic material and 5 cm x 5 cm heat seal patch in each top corner in the location shown in Dwgs. 1 & 2. The finished pad shall also have the bottom stitched with a 2.5 cm high and 2.5 cm wide (point-to-point) 'zigzag' stitch across the entire width of the panel through the ballistic material only, designed to contain loose/fraying yarns. The bottom points of the zigzag shall run to the edge of the panel, the ends of the stitching near the side edges shall not extend into the curved corner area, in accordance with Dwgs. 1 & 2, nor begin more than 2.5 cm from the start of the curved corner area.

- 4.4.2 **Ballistic Protection** - In addition to the requirements of Para. 4.1 and 4.1.1, ballistic panels shall have equal ballistic resistance capabilities when shot from either side of the panel.

- 4.4.3 **Pouch Construction** - The nylon pouch made of the material specified in Para. 4.2.2 shall be sealed along all edges. This sealing process along with the physical characteristics of the pouch fabric, will create a waterproof pouch for the ballistic material, the edge seal being durable and waterproof for the expected life of the

pouch. The sealed pouch outside edge shall extend to a maximum of 2.25 cm beyond the edge of the ballistic material, with the width of the sealed portion itself being a maximum of 1 cm. The pouch shall have 8 cm x 5 cm hook tape patches permanently attached to the outside of the pouch (by such means as heat-pressing), positioned to attach to corresponding loop tape pieces on the inside of the internal and external carriers. Pouch material 5 cm x 5 cm as described in Para. 4.2.2 shall be sewn to the ballistic panel in the corresponding location as the hook patches at the shoulders on the outside of the pouch. Each 5 cm x 5 cm patch shall be attached to the ballistic panel with two 5 cm long 3-pass tacks through all layers of ballistic material across the full width of the patch 1.3 cm from the top and bottom edges of the patch. The heat sealable surface of the 5 cm x 5 cm piece of pouch material shall face away from the ballistic material. During the pouch finishing process, this piece of pouch material shall be sealed to the inside surface of the pouch using a suitable method (heat-sealing, thermo-welding, etc.) to ensure a permanent, durable bond.

Note: Any sealing method used during the finishing of the pouch shall not damage the ballistic material or compromise ballistic performance in any way.

- 4.4.4 **Care and Instruction Label** - Each pouch must have a care and instruction label permanently attached to the outer surface of the pouch by such means as thermo-welding, heat-sealing, etc., with instructions indelibly and permanently printed, in English and French. The date of manufacture will be in the MM/YYYY numerical format. The label will include bilingual washing instructions which shall be as follows:

**‘CARE INSTRUCTIONS FOR BALLISTIC PANELS/
INSTRUCTIONS D’ENTRETIEN POUR PANNEAUX BALISTIQUES**
REMOVE BALLISTIC PANEL BEFORE CLEANING CARRIER/AVANT DE LAVER LE GILET
PARE-BALLES, RETIRER LES PANNEAUX BALISTIQUES.
WIPE PROTECTIVE PANEL WITH A WATER DAMPENED CLOTH ONLY/
ESSUYER LES PANNEAUX À L’AIDE D’UN CHIFFON LÉGÈREMENT IMBIBÉ D’EAU
SEULEMENT.
DO NOT DRY CLEAN/NE PAS NETTOYER À SEC.
DO NOT BLEACH/NE PAS UTILISER D’AGENT DE BLANCHIMENT.
DO NOT EXPOSE TO DIRECT SUNLIGHT/NE PAS PLACER EN PLEIN SOLEIL.
FAILURE TO FOLLOW INSTRUCTIONS FOR WASHING AND HANDLING THIS PANEL WILL
AFFECT ITS BALLISTIC RESISTANT QUALITIES/LE NON-RESPECT DES INSTRUCTIONS
D’ENTRETIEN RÉDUIRA LA RÉSISTANCE BALISTIQUE DES PANNEAUX.’

The label must have the following phrasing:

‘This ballistic panel complies with the threat level of RCMP specification G.S. 1045-177.
Ce panneau balistique est conforme au niveau de menace indiqué dans la spécification G.S. 1045-177 de la GRC.’

The label must clearly indicate the following information:

- manufacturer's identification/identification du fabricant;
- date of manufacture (in MM/YYYY format)/date de confection (en format MM/AAAA);
- size/taille;
- Lot number from roll of ballistic fabric/numéro de lot inscrit sur le rouleau de tissu balistique;
- vest serial number, displayed by both numbers/letters and barcode/numéro de série du gilet (chiffres et lettres et code à barres);
- RCMP material master number/numéro de fiche article de la GRC.

A box shall be included and indicated on the label as such for the date of issue [Note: date of issue is determined and stamped in this box by the RCMP upon issuing to a user]. The words 'Date of issue/date d'émission' shall be in letters no less than 5mm high, font as per the rest of the label.

Dwg. 4 shows an example of an acceptable label.

4.4.4.1 **Serial Numbering of Vest panels**

Each vest shall have a unique serial number applied to it. The serial number shall apply to both the front and back panels of a single set of panels. This number shall appear on panel labels as per the requirements of Para. 4.4.4 above, the barcode to be of a 'universal' type readable by commonly-used commercial handheld barcode scanners. The serial number shall be any combination of numbers and/or letters required to successfully differentiate an RCMP soft body armour vest from any other vest produced by the same manufacturer whether for the RCMP or not. Manufacturers will maintain this serialization system for a period long enough to avoid duplication. Upon request, a list of manufactured vests with their serial numbers shall be made available to the RCMP. This request may be made as part of a contract requirement or at any time.

- 4.4.5 **Patterns** - Patterns for all listed sizes of the ballistic panels will be provided by the RCMP. Special sizes will follow the same shape and coverage as those shown in this specification. Refer to Appendix 'A' for pattern list.

5. **Delivery, Packing and Marking of Containers**

- 5.1 Unless otherwise specified the items shall be delivered to the Commissioner, RCMP, Uniform & Equipment Program, Ottawa, Ontario, free of transportation charges and provincial tax.
- 5.2 Packing and marking of shipping containers shall be as specified in the invitation to tender.
- 5.3 A packing slip shall be enclosed showing contents of each shipment.

6. **Quality Assurance Provisions**

- 6.1 **Production Lot Testing, Ballistic Aramid Cloth and Panels** - A lot of finished soft body armour vests shall consist of as many ballistic panels as can be manufactured from approximately 1000 to 3000 metres of ballistic aramid cloth.
- 6.1.1 **Ballistic Aramid Cloth Information** - Every lot shall be accompanied by a data sheet for the ballistic cloth with the following information:

Property	Acceptable Test Method
Fibre type	---
Weave Type	---
Fabric weave count, warp and weft	ASTM D3775
Fabric Weight	ASTM D3776
Tensile Strength	ASTM D5034
Tensile Tearing	ASTM D2261

- 6.1.2 **Testing, Ballistic Aramid Panels** - Every lot shall be tested ballistically for the following:
- V₅₀ ballistic resistance using 9 mm FMJ 116 grain IVI brand ammunition to be performed on a finished front and back size 44-46 regular male vest without carrier, Dry Test Only.
 - V₅₀ ballistic resistance using .357 Magnum, Jacketed Soft Point, 158 grain ammunition to be performed on a finished front and back size 44-46 regular male vest without carrier, Dry Test Only.
 - V₅₀ test protocol to be as per Para. 2.5.
 - N.I.J. sampling, two complete vests per lot for dry, wet and angle shots with exceptions noted in Para. 4.1.1.

NOTE: If, during V_{50} testing, a penetration occurs at or below the maximum velocity permitted under the 'pass/fail' testing, the lot shall be determined to have failed to meet RCMP requirements.

- 6.1.3 **Test for Waterproofness** – Finished panels submitted for production lot ballistic testing shall also be tested for waterproofness by the following method, prior to ballistic testing: Panels shall be weighed, the weight recorded, and then the panel fully immersed vertically in a suitably-sized basin of tap water at room temperature (21°C, +2°C/- 5°C) for no less than 30 minutes. After that time, the panel will be removed from the water, hung vertically and allowed to dry for 10 minutes and weighed again. Any appreciable weight gain not attributable to water clinging to the surface of the panel will be considered evidence of a lack of waterproofness. In addition, any air bubbles observed to be emerging from fully submerged panels will be considered evidence of a lack of waterproofness. Failure to meet waterproof requirements may be considered grounds for rejection of a lot or an entire shipment.
- 6.1.4 **Testing Costs and Shipping of Finished Panels** - All Production Lot testing costs will be paid for and arranged by the manufacturer of the finished vests. All test reports related to each lot must be submitted to the RCMP for approval prior to the shipping of any goods.
Records related to and including production and testing of ballistic aramid cloth and ballistic panels/vests must be maintained by the producing textile mill and vest manufacturer for a minimum period of 10 years. The records must be available for RCMP reference.
- 6.1.5 **Test Facilities** - All testing at any stage of a contract including the pre-contract award period must be performed by a test facility which operates independently, is unaffiliated with any of the potential proponents and is capable of performing ballistic and testing on an ongoing basis to the satisfaction of the Royal Canadian Mounted Police.
- 6.2 **Responsibility for Inspection** - Unless otherwise stipulated in the contract, it is the prime contractor's responsibility to satisfy the RCMP that the material and services supplied conform to this specification.
- 6.3 The RCMP reserves the right to perform any inspection considered necessary to ensure the material and services conform to the specified requirements. For the purpose of inspection, a portion of each delivery not exceeding two percent or two out of any number delivered under 100 may be put to tests that could destroy the articles. If found to be inferior or not in accordance with this specification, all

articles so destroyed shall be replaced by others of proper quality and pattern at the expense of the contractor. The entire delivery may also be rejected if it is found that articles previously rejected due to non-repairable defects are redelivered for inspection.

- 6.4 The contractor will be promptly notified when any articles are not accepted and such articles will be returned at the contractor's risk and expense.

APPENDIX A

Sealed Pattern Identifier

Pattern #: G.S. 1045-177 Ballistic Panels
 Title: Vest, Soft Body Armour

Paper Patterns - Paper patterns are available for the ballistic panels from the RCMP, Uniform & Equipment Program, Ottawa Ontario, under Pattern # G.S.1045-177. Firms requested to produce Pre-contract Award Samples will be provided with the base pattern only. The full set of patterns either in individual sizes or as a graded nest will be provided to the successful bidder after the contract is awarded.

The paper patterns include, where applicable, seam allowances, drill holes and/or placement templates. Contractors may make changes required to suit their production process, however, the design and grade shall not be affected or changed.

All patterns are property of the RCMP and must be returned upon completion of the contract.

Pattern Pieces - This design has 2 pattern components.

Legend:

Material = Ballistic Aramid Panel

Pattern Components	Nomenclature	Quantity to be cut	Material
# 1 of 2	Front Panel, Internal	Ref. Para. 4.4.2	Ballistic Aramid Panel
# 2 of 2	Back Panel, Internal	Ref. Para. 4.4.2	Ballistic Aramid Panel

APPENDIX B

Vest, Soft Body Armour Scale of Measurements Front Panel

Dimensions in cm				
Size	A	B	C	D
32-34 Short	31.5	40.5	14	24
36-38 Short	32	45.5	14.15	26
40-42 Short	32.75	50.5	14.25	28
44-46 Short	33.5	55.5	14.5	30
48-50 Short	34	60.5	14.75	32
32-34 Regular	36.5	40.5	18	24
36-38 Regular	37	45.5	18.25	26
40-42 Regular	37.75	50.5	18.5	28
44-46 Regular	38.5	55.5	18.75	30
48-50 Regular	39.25	60.5	19	32
32-34 Tall	37	40.5	18.5	23.5
36-38 Tall	39	45.5	19.5	26
40-42 Tall	40.5	50.5	20.25	28.5
44-46 Tall	42.5	55.5	21	31.5
48-50 Tall	44.5	60.5	22	35.25
Tolerance	+/- 0.5 cm			

APPENDIX B
(continued)

Vest, Soft Body Armour
Scale of Measurements
Rear Panel

Dimensions in cm				
Size	E	F	G	H
32-34 Short	31.25	40.5	14	23.25
36-38 Short	32	45.5	14.15	25.5
40-42 Short	32.75	50.5	14.25	27.5
44-46 Short	33.5	55.5	14.5	29.25
48-50 Short	34	60.5	14.75	32.25
32-34 Regular	36.5	40.5	18	23.25
36-38 Regular	37	45.5	18.25	25.25
40-42 Regular	37.75	50.5	18.5	27.25
44-46 Regular	38.5	55.5	18.75	29.25
48-50 Regular	39.25	60.5	19	31.25
32-34 Tall	37	40.5	18.5	23.5
36-38 Tall	38.75	45.5	19.5	25.5
40-42 Tall	40.5	50.5	20.25	27.75
44-46 Tall	42.25	55.5	21	29.75
48-50 Tall	44	60.5	22	32
Tolerance	+/- 0.5 cm			

APPENDIX ‘C’

Certification & Evaluation Criteria

Appendix C contains definitions of compliance and certification requirements for all materials specified in this document. The evaluation criteria is a reference list and shall be used by RCMP Uniform & Equipment Program to ensure all documentation is received and meets the requirements outlined in this specification.

Definitions:

Certification of compliance: Compliance certification documents shall be based on testing from a raw goods manufacturer from an in-house or independent, third-party accredited laboratory acceptable to the RCMP to verify performance requirements as specified in this specification.

Test Report: Test report documents shall include the test method, test conditions and test results performed by an independent, third-party accredited laboratory acceptable to the RCMP to verify requirements as specified in this specification.

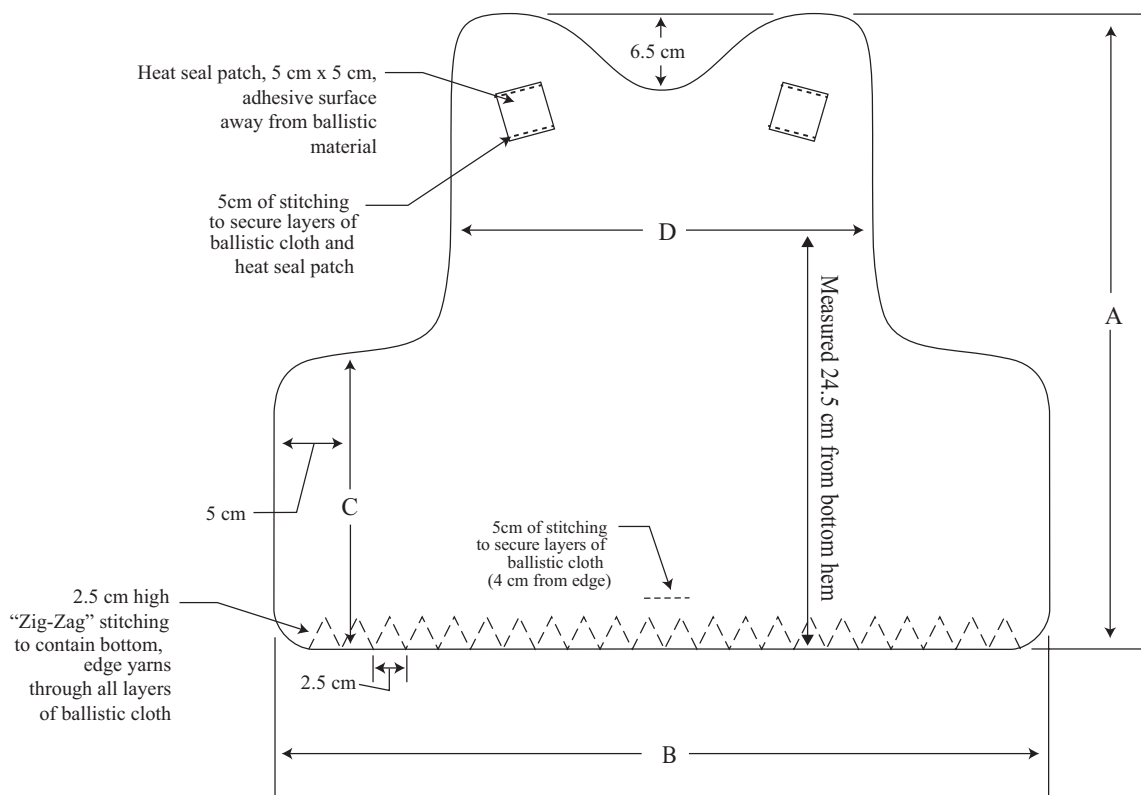
All certificates and test reports that verify the performance of materials used in manufacturing the finished item shall be retained by the manufacturer and shall be made available to ensure that all items meeting the requirements have completed all of the testing and certification required by this specification. Failure to provide the requested documentation shall be cause for rejection. Failure to meet the requirements when tested by the RCMP Uniform & Equipment Program shall be cause for rejection.

Certification & Evaluation Criteria

Para. Title/Test	Certification of Compliance/Test Data	Pass/Fail
Ballistic Cloth (Para. 4.2.1)	Certification of Compliance Required	
Pouch Cloth (Para. 4.2.2)	Certification of Compliance Required	
Hook tape (Para. 4.2.3)	Certification of Compliance Required	
Thread (Para. 4.2.4)	Certification of Compliance Required	

Front Ballistic Panel

Dwg. 1



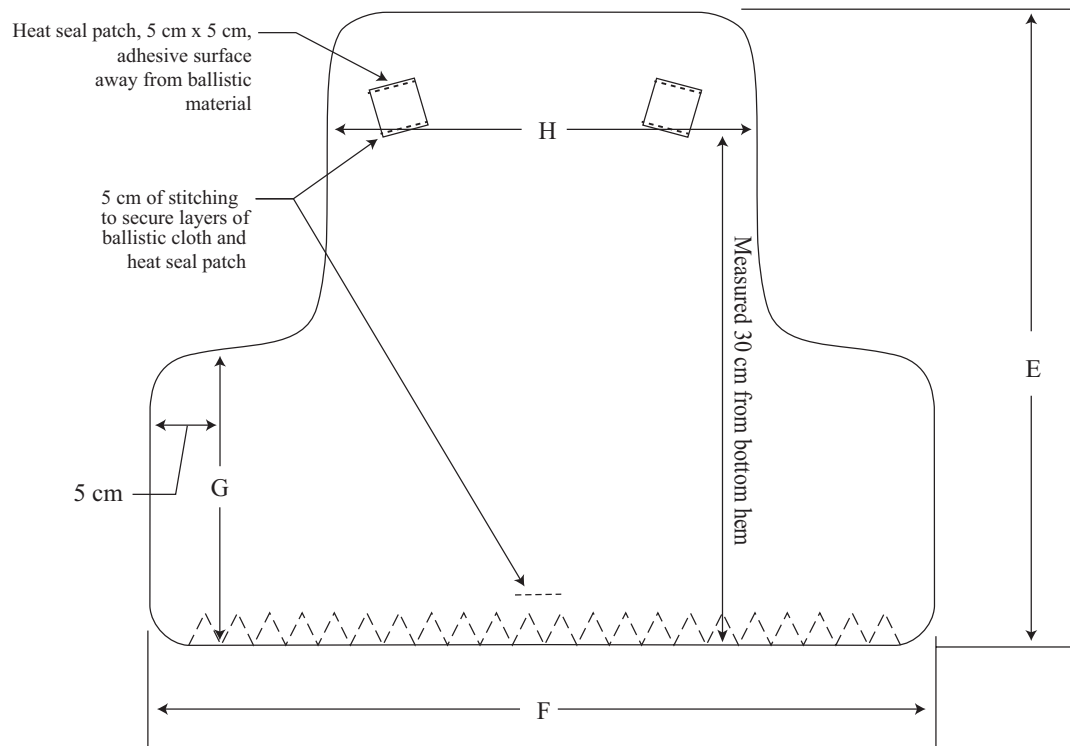
NOT TO SCALE

All measurements in centimetres unless otherwise indicated

Tolerance: +/- 0.5 cm

Back Ballistic Panel

Dwg. 2



NOT TO SCALE

All measurements in centimetres unless otherwise indicated

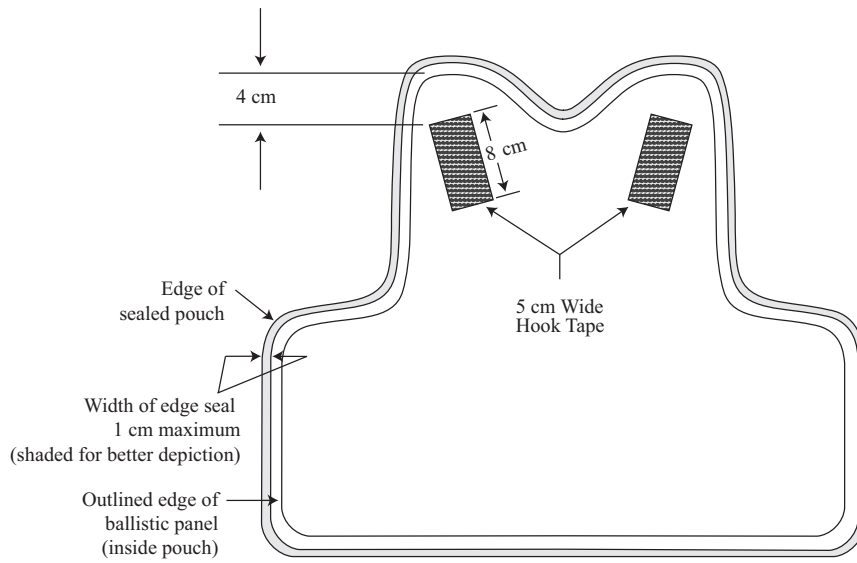
Tolerance: +/- 0.5 cm

RCMP VEST, SOFT BODY ARMOUR

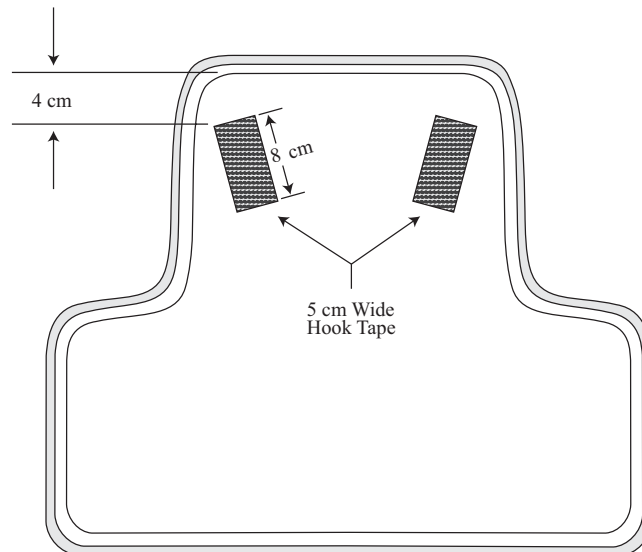
G.S.1045-177

Pouches, Front and Back

Dwg. 3



Pouch, Front



Pouch, Back

NOT TO SCALE

All measurements in centimetres unless otherwise indicated

Tolerance: +/- 0.5 cm

Label, Care and Instruction

Example

Dwg. 4

**CARE INSTRUCTIONS FOR BALLISTIC PANELS/
INSTRUCITONS D'ENTRETIEN POUR PANNEAUX
BALISTIQUES**

- REMOVE BALLISTIC PANEL BEFORE CLEANING CARRIER/
AVANT DE LAVER LE GILET, RETIRER LES PANNEAUX
BALISTIQUES.
- WIPE PROTECTIVE PANEL WITH A WATER DAMPENED
CLOTH ONLY/
ESSUYER LES PANNEAUX À L'AIDE D'UN CHIFFON
LÉGÈREMENT IMBIBÉ D'EAU SEULEMENT
- DO NOT DRY CLEAN/ NE PAS NETTOYER A SEC.
- DO NOT BLEACH/ NE PAS UTILISER D'AGENT DE BLANCHIMENT.
- DO NOT EXPOSE TO DIRECT SUNLIGHT/ NE PAS PLACER EN
PLEIN SOLEIL.

FAILURE TO FOLLOW THESE INSTRUCTIONS FOR WASHING AND
HANDLING THIS PANEL WILL AFFECT ITS BALLISTIC RESISTANT
QUALITIES.

LE NON-RESPECT DES INSTRUCTIONS D'ENTRETIEN RÉDUIRA LA
RÉSISTANCE BALISTIQUE DES PANNEAUX.

This ballistic panel complies with the threat level of R.C.M.P.
specification G.S.1045-177.

Ce panneau balistique est conforme au niveau de menace indiqué dans
la spécification G.S.1045-177 de la GRC.

**BODY SIDE - THIS SIDE TO FACE WEARER
CE CÔTÉ DÔIT ÊTRE PLACÉ CONTRE VOTRE CORPS**

Date of Issue/ Date d'Emission

Manufacturer's Identification/

Identification du fabricant:

XYZ Mfg. Co. Ltd.
123 Alpha Lane
Anytown, B.C.
V1V 1V1

Size/

Taille: 32-34S

Lot number from roll/

Numéro du lot inscrit
sur le rouleau: A10400

Date of manufacture/

Date de confection: 12/2014

RCMP stock number/Numéro

de l'article de la GRC: 8052-010

Serial N°/ Numéro de série



22TA009RCM00