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**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

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Title - Sujet Outerwear, Consolidated	
Solicitation No. - N° de l'invitation M0077-15I106/A	Amendment No. - N° modif. 009
Client Reference No. - N° de référence du client M0077-15I106	Date 2016-04-28
GETS Reference No. - N° de référence de SEAG PW-\$\$PR-760-70425	
File No. - N° de dossier pr760.M0077-15I106	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-05-12	
Time Zone Fuseau horaire Eastern Daylight Saving Time EDT	
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: Richard, Josette	Buyer Id - Id de l'acheteur pr760
Telephone No. - N° de téléphone (613) 462-4128 ()	FAX No. - N° de FAX () -
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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

Solicitation No. - N° de l'invitation
M0077-15I106/A
Client Ref. No. - N° de réf. du client
M0077-15I106

Amd. No. - N° de la modif.
009
File No. - N° du dossier
pr760. M0077-15I106

Buyer ID - Id de l'acheteur
pr760
CCC No./N° CCC - FMS No./N° VME

Amendment 009

The purpose of this amendment is to revise Annex B (G.S. 1045-298) and Annex E (G.S 1045-310).

1) DELETE:

ANNEX B - SPECIFICATION - G.S. 1045-298, JACKET, PATROL UNISEX, dated 2015-07-09

REPLACE WITH:

ANNEX B - SPECIFICATION - G.S. 1045-298, JACKET, PATROL UNISEX, dated 2016-04-27
(refer to document attached)

2) DELETE :

SPECIFICATION - G.S. 1045-310, JACKET, HIGH VISIBILITY, dated 2015-07-09

REPLACE WITH:

SPECIFICATION - G.S. 1045-310, JACKET, HIGH VISIBILITY, dated 2016-04-27
(refer to document attached)

All other terms and conditions remain unchanged.



Royal Canadian Mounted Police
Gendarmerie royale du Canada

Doc. no: G.S. 1045-298

Date: 2016-04-27

Specification

Jacket, Patrol, Unisex

This document has 38 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

[illegible]

RCMP VIEWING SAMPLE

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

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
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

JACKET, PATROL, UNISEX

1. Definitions

- 1.1 This specification shall govern the manufacture and inspection of Jacket, Patrol, Unisex. The specific item covered under this specification with stock number is as follows:
 - i. 4010 Jacket, Patrol, Unisex / Blouson de patrouille unisexe
 - ii. 4011-100 Jacket, Patrol, Unisex, Special / Blouson de patrouille unisexe, tailles spéciales
- 1.2 This specification, pattern, drawing, viewing sample, or other information issued in connection therewith, may only be used for specific enquiries, solicitations, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for RCMP Jacket, Patrol, Unisex.
- 1.4 This specification has been translated into French from this original English language document.

2. Applicable Specifications

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the solicitation, unless otherwise specified.
- 2.2 CAN/CGSB 4.2, Textile Test Methods.
- 2.3 CAN/CGSB 4.131-93, Thread, Polyester, Polyester or Cotton Covered.
- 2.4 FED-STD-191A, Federal Standard, Textile Test Methods.
- 2.5 ASTM, American Society for Testing and Materials, Method D3776/D3776M-09a (2013), D2097-03 (2010), D413-98, D3886-99 (2013), D4966-12, D1424-09 (2013), D5034-09 (2013), D5169-98 (2015), D5170-98 (2015) and F392/F392M-11.

- 2.6 AATCC-8-2013, 61-2013, 118-2013 and 135-2012, American Association of Textile Chemists and Colorists - Technical Manual.
- 2.7 ISO 105-B02:2014, ISO 13937-1:2000, International Standards Organization.
- 2.8 BS 3424-26: 1990, Method 29A, British Standards Institution.
- 2.9 RCMP Specification, G.S.1045-266, Badges Woven Item - Badge, Shoulder, Cloth, Police.
- 2.10 RCMP Purchase Description, PD-PE-93, Police Patch, Reflective, Large & Small.
- 2.11 CAN/CGSB 86.1-2003, Care Labelling of Textiles.

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 pattern and viewing sample.
- 3.2 **Design** - The Jacket, Patrol, Unisex shall be a loose fitting, waist length jacket designed to be worn in conjunction with a removable fleece jacket. The shell is constructed from a 3-layer material with a WMVP (waterproof moisture vapour permeable) membrane. The 3-layer fabric construction does not require a lining when made up into a garment. The jacket shall be waterproof with all seams permanently seam sealed unless otherwise stated.

4. **Detail Requirements**

4.1 **Components**

- 4.1.1. **Shell Material I** - The shell material I shall be plain weave 100% nylon, Type 6.6. The color shall be dark navy blue, meeting the approved color swatch, with a durable water repellent finish. An appropriate heat-set process shall be applied to the shell material in order to be prepared for the lamination of the waterproof moisture vapour permeable membrane as specified in Para. 4.1.2.

- 4.1.2. **Shell Material I, Laminated** – The shell material shall be laminated in a 3-layer format with a membrane, which after lamination provides a high level of water resistance/waterproofness and breathability. The outer layer shall consist of shell material as specified in Para. 4.1.1, with the membrane as the middle layer, and a black, 100% nylon or polyester warp tricot knit fabric with a maximum weight of 55 g/m², as the inner layer. The layers shall be joined together by a suitable lamination process. The membrane when laminated to the shell material shall meet the test requirements outlined in Table I and Table II forming part of this specification. The laminated shell materials shall not show any visible signs of delamination or loss of film during the garments useful life (approximately 5 years). The fabric shall be capable of having its sewn seams, seam-sealed with an appropriate tape, in a waterproof, durable fashion. Materials not meeting these requirements will be cause for rejection. Delamination is defined as any irreparable separation of the bonded layers of the Laminated Shell Material(s).
- 4.1.3. **Seam Sealing Tape** – The 3-layer composite fabric shall be seamed using a compatible nylon or polyester seam-sealing tape with the 3-layer shell fabric and sealed-seams meeting the requirements outlined in Table I forming part of this specification. The tape on the sealed seams shall not peel off and/or wear during the projected life span of the garment.
- 4.1.4. **Back Yoke Lining Material** - The back yoke lining material shall be 70 denier 100% nylon, weighing between 60-70 g/m², black in colour or to match the shell material.
- 4.1.5. **Mesh Pocketing** - The pocketing shall be a polyester, warp knit mesh, black in colour or to match the shell material, meeting the requirements outlined in Table III. Tek-Knit “XPTAR004” is known to meet the requirement.
- 4.1.6. **Reflective Police Patches** – The RCMP stock item number 8653-100, Police Patch, Reflective, Large and RCMP stock item number 8654-100, Police Patch, Reflective, Small shall be purchased from the RCMP.
- 4.1.7. **Shoulder Badges** - The RCMP stock item number 2135-108, Badge, Shoulder, Police shall be purchased from the RCMP.
- 4.1.8. **Thread** - The thread shall be polyester wrap, polyester core, Tex 50, Class B of matching colour, meeting CAN/CGSB 4.131-93.

4.1.9 Slide Fasteners - Lengths - Measurements in Inches

Height Group	Sizes	Front	Inside Front	Side Seam	Sleeve Pocket	Chest Pocket	Lower Front Pocket	Inside Pocket
X Short	XX Small	17½"	13½"	13"	7"	5"	5½"	7"
	X Small	18½"	14½"	13"	7"	5"	5½"	7"
	Small	19"	15"	13"	7"	5½"	5½"	7"
	Medium	20"	15½"	14"	7"	5½"	5½"	7"
	Large	21"	16½"	14"	7"	6"	5½"	7"
	X Large	21½"	17½"	15"	7"	6"	5½"	7"
	2X Large	22½"	18"	15"	7"	6"	5½"	7"
	3X Large	23"	19"	15"	7"	6"	5½"	7"
	4X Large	24"	20"	16"	7"	6"	5½"	7"
	5X Large	25"	20½"	16"	7"	6"	5½"	7"
Short	XX Small	19½"	15½"	15"	7"	5"	6½"	7"
	X Small	20½"	16"	15"	7"	5"	6½"	7"
	Small	21"	17"	15"	7"	5½"	6½"	7"
	Medium	22"	18"	16"	7"	5½"	6½"	7"
	Large	23"	18½"	16"	7"	6"	6½"	7"
	X Large	23½"	19½"	17"	7"	6"	6½"	7"
	2X Large	24½"	20"	17"	7"	6"	6½"	7"
	3X Large	25"	21"	17"	7"	6"	6½"	7"
	4X Large	26"	22"	18"	7"	6"	6½"	7"
	5X Large	27"	22½"	18"	7"	6"	6½"	7"
Regular	XX Small	21½"	17½"	17"	8"	5"	8"	7"
	X Small	22½"	18"	17"	8"	5"	8"	7"
	Small	23"	19"	17"	8"	5½"	8"	7"
	Medium	24"	20"	18"	8"	5½"	8"	7"
	Large	25"	20½"	18"	8"	6"	8"	7"
	X Large	25½"	21½"	19"	8"	6"	8"	7"
	2X Large	26½"	22"	19"	8"	6"	8"	7"
	3X Large	27"	23"	19"	8"	6"	8"	7"
	4X Large	28"	24"	20"	8"	6"	8"	7"
	5X Large	29"	24½"	20"	8"	6"	8"	7"
Tall	XX Small	23½"	19½"	19"	8"	5"	8"	7"
	X Small	24½"	20"	19"	8"	5"	8"	7"
	Small	25"	21"	19"	8"	5½"	8"	7"
	Medium	26"	22"	20"	8"	5½"	8"	7"
	Large	27"	22½"	20"	8"	6"	8"	7"
	X Large	27½"	23½"	21"	8"	6"	8"	7"
	2X Large	28½"	24"	21"	8"	6"	8"	7"
	3X Large	29"	25"	21"	8"	6"	8"	7"
	4X Large	30"	25½"	22"	8"	6"	8"	7"
	5X Large	31"	26"	22"	8"	6"	8"	7"
X Tall	XX Small	25½"	21½"	21"	8"	5"	8"	7"
	X Small	26½"	22"	21"	8"	5"	8"	7"
	Small	27"	23"	21"	8"	5½"	8"	7"
	Medium	28"	24"	22"	8"	5½"	8"	7"
	Large	29"	24½"	22"	8"	6"	8"	7"
	X Large	29½"	25½"	23"	8"	6"	8"	7"
	2X Large	30½"	26"	23"	8"	6"	8"	7"
	3X Large	31"	27"	23"	8"	6"	8"	7"
	4X Large	32"	27½"	24"	8"	6"	8"	7"
	5X Large	32½"	28½"	24"	8"	6"	8"	7"
XX Tall	XX Small	27½"	23½"	23"	8"	5"	8"	7"
	X Small	28½"	24"	23"	8"	5"	8"	7"
	Small	29"	25"	23"	8"	5½"	8"	7"
	Medium	30"	25½"	24"	8"	5½"	8"	7"
	Large	31"	26½"	24"	8"	6"	8"	7"
	X Large	31½"	27"	25"	8"	6"	8"	7"
	2X Large	32"	28"	25"	8"	6"	8"	7"
	3X Large	33"	29"	25"	8"	6"	8"	7"
	4X Large	34"	29½"	26"	8"	6"	8"	7"
	5X Large	34½"	30½"	26"	8"	6"	8"	7"

- 4.1.9.1 **Slide Fastener - Front** - Shall be an open-end separator, black in colour, injection molded, DA automatic slider, Vislon® YKK 26500 VSO 56 9/16 (only).
- 4.1.9.2 **Slide Fastener - Right Inside Front** - (To be used for the attachment of a removable fleece jacket) - Shall consist of ½ (half) of an open-end slide fastener with the retaining box and slider; it shall be injection molded, with a DA automatic slider, black in colour, Vislon® YKK 26590 VSO 56 9/16 (only).
- 4.1.9.3 **Slide Fastener - Left Inside Front** - (To be used for the attachment of a removable fleece jacket) Shall consist of ½ (half) of an open-end slide fastener with the insert pin and shall be injection molded, black in colour, Vislon® YKK 26590 VSO 56 9/16 (Left Hand Pin Insertion) (only).
- 4.1.9.4 **Slide Fastener - Upper & Lower Front Pockets** - Shall be a closed end coil type slide fastener with a DF non-lock slider, black in colour, with long pull tabs, YKK 12430 CIFIC 51 DFL1 E 5/8 (only).
- 4.1.9.5 **Slide Fastener - Upper Sleeve Pocket** - Shall be a closed end coil type slide fastener with a DF non-lock slider, black in colour, YKK 12824 CIFIC 51 DFW1 E 5/8 (only).
- 4.1.9.6 **Slide Fastener - Side Seam** - Shall be water repellent, black in colour, with the tape treated with a strong water repellent finish and a coated back of polyurethane. PU coated side as the front with the sliders on. It shall be closed-ended with double sliders arranged in a head-to-head relation, Aqua Guard YKK 37338 CNT4MC 56/6/6 DA8BLH E/DA8BLH E/DA8LH E 5/8*B-B*H-H*TS-BTM*REV* (only).
- 4.1.9.7 **Slide Fastener - Inside Pockets** - The inside pocket slide fasteners shall be black in colour, woven-in style, DA automatic slider, YKK 20054 CFC 456 DA E 9/16 *E-BTM-2* (only).
- 4.1.10 **Hook and Loop Tape** - The 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 with initial peel strength of not less than 1 P.I.W. when tested to ASTM D5169-98 (2015), standard test method for shear strength [dynamic method] of hook and loop touch fasteners and ASTM D5170-98 (2015), standard test method for peel strength ["T" method] of hook and loop touch fasteners."

- 4.1.11 **Elastic Drawcord** - The drawcord shall be round braided polyester elastic, black in colour, 2.4 mm, with maximum elongation of 135% and full recovery. Cansew style #EBR C-38 is known to meet the requirement.
- 4.1.12 **Cord Locks**
- 4.1.12.1 **Cord Locks** - The cord locks shall be low profile cord lock cylinder, spring loaded in acetyl composition, black in colour. It shall come in two sizes. The cord lock for the hem channel shall be shaped with a maximum diameter of 13 mm and a maximum depth of 11.2 mm. Texfast style #S217B is known to meet the requirement. The cord lock for the hood shall be shaped with a maximum diameter of 15.5 mm and a maximum depth of 12.5 mm. Texfast style #S217A is known to meet the requirement.
- 4.1.12.2 **Toggle Lock** - The lock shall be oval shaped with a maximum length of 30 mm and a maximum width of 9 mm, with two 4 mm holes, acetyl composition, and black in colour. It may be of sew on or clamp-on version.
- 4.1.13 **Eyelets** - The eyelets shall be black in colour with a 5-6 mm diameter hole, brass or aluminum.
- 4.1.14 **Dome Fastener** - The dome fastener shall be a standard type 24 ligne fastener. All metal parts to be brass with a 15 mm matte black, powder coated cap. Universal SW61 (only).
- 4.1.15 **Elastic** - The elastic shall be heavy duty nylon or polyester, black in colour, with maximum elongation of 130% and full recovery. It shall come in two widths, 2.5 cm and 4 cm. The elastic measuring 2.5 cm shall be used in a double layer for the side seam closure strap. The elastic measuring 4 cm shall be used for the sleeve cuff.
- 4.1.16 **Grosgrain Ribbon** - Shall be nylon grosgrain ribbon, black in colour and come in three widths, 6 mm, 1 cm and 2.5 cm.
- 4.1.17 **Webbing, Microphone Strap** - The webbing shall be a durable nylon webbing, luggage quality, black in colour measuring 2.54 cm (1") wide and 0.04" \pm 0.01" thick. It shall have a minimum tensile strength of 1000 lbs. as per Federal Standard 191-5206 test method #4108. Tape Craft #N0015-1"-YD001-352 is known to meet the requirements.

- 4.2 **Size and Dimensions** - Jacket, Patrol, Unisex, to this specification 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 and Seam Sealing** - All stitching shall be lockstitch. There shall be not less than three or more than four stitches per centimetre. The beginning and ending of all stitching shall be securely backstitch tacked, unless secured by other stitching. All seams and points where stitching penetrates the shell materials shall be permanently sealed on the inside with the appropriate seam-sealing tape as per Para. 4.1.3. Care shall be taken to ensure that the tape cross-over points where seams join are doubly covered and bonded securely so as to ensure water-resistance. Any sealed seams showing any form of delamination or any non-bonded or peeling seams shall be a cause for rejection.
- 4.3.2 **Body**
- 4.3.2.1 **Back & Back Yoke** - The body shall be made from shell material, as specified in Para. 4.1.2 and shall have a two piece back with ‘beaver tail’ type extension. There shall be a large ‘hide away’ police patch, constructed from the shell material as specified in Para. 4.1.2 and a reflective police patch as per Para. 4.1.6. It shall be shaped and dimensioned as per the patterns and applied to the back yoke. The back yoke shall be faced with lining as specified in Para. 4.1.4 and stitched from side seam to side seam as shown in drawing # 6 and seam sealed appropriately to ensure waterproofness. The back and back yoke when finished shall be shaped and dimensioned as per the pattern and viewing sample.
- 4.3.2.2 **Back Hem Channel** - The back hem facing shaped and dimensioned as per the pattern shall be sewn face side out, to the bottom of the jacket back to create a hem channel for the elastic drawcord. The hem channel shall have two eyelets as per Para. 4.1.13, 4 cm from the left side seam as identified in drawing # 5. An elastic drawcord as specified in Para. 4.1.11 shall be securely attached into the right side seam and threaded through the hem channel. It shall continue through the smaller cord lock as specified in Para. 4.1.12.1, and through the eyelet outside the hem channel. It shall be threaded through the toggle lock as specified in Para. 4.1.12.2 and back through a second eyelet. It shall continue back through the cord lock

where the drawcord shall be knotted. When assembled completely, the cord lock shall be hidden in the channel with only the looped end of the elastic drawcord and the toggle lock showing as per drawings # 3.

- 4.3.2.3 **Front** - The jacket shall be equipped with a center front slide fastener length as specified in Para 4.1.9 and the bottom ends of the slide fasteners shall be bar tacked as per drawing # 3. The front shall have two front storm flaps with dome fasteners for closure. The front shall have four pockets, two upper and two lower pockets, all with slide fasteners and flaps. The outer front yoke extension shall be manufactured in a way to create a pocket flap with a dome fastener in order to close the zippered chest pockets. Under the outer right front yoke flap, there shall be a small “hide away” reflective police patch and above the pocket flap shall be an 8.5 cm x 2.5 cm piece of loop tape as specified in Para. 4.1.10 for the name tag. Both outer left and right front yoke shall be equipped with webbing as specified in Para. 4.1.17, measuring 2.5 cm x 5 cm for the microphone loop. All components of the front shall be constructed as per the patterns and drawings.
- 4.3.2.4 **Chest Pockets** - The jacket shall have two upper front pockets with slide fasteners as specified in Para. 4.1.9.4 and lengths outlined in Para. 4.1.9. Each chest pocket shall have flaps created from the front yoke extension pattern piece which shall be dimensioned in accordance with the patterns and drawing # 2. The slider shall be in a position closest to the center front when closed. Ribbon pulls as specified in Para. 4.3.12 shall be applied to the sliders. Applied to the top right front flap, shall be a small ‘hide away’ reflective patch constructed from shell material and a reflective police patch as per Para. 4.1.6 and drawing # 6. The reflective police patch shall be sewn on top of the pull-down with the side edges folded under. The centre front of the front yoke piece when sewn to create a pocket flap shall be secured with a dome fastener as specified in Para. 4.1.14. There shall be two inside pockets constructed out of mesh material as specified in Para. 4.1.5 secured with a slide fastener as specified in Para. 4.1.9.7 and lengths as specified in Para. 4.1.9. There shall be two labels sewn through the mesh inner pocket bag with the Identification label and Marking and Cleaning Instruction as shown in the drawing # 3.
- 4.3.2.5 **Lower Pockets** - The jacket shall have two lower front pockets with slash openings and flaps. Both lower pockets shall have slide fasteners as specified in Para. 4.1.9.4, lengths as specified in Para. 4.1.9. Ribbon pulls as specified in Para. 4.3.12 shall be applied to the sliders. The slider shall be in an upright position when the pocket is closed. The pocket bags shall be constructed from mesh material as specified in Para. 4.1.5 dimensioned and positioned as per the patterns and drawings.

- 4.3.2.6 **Under Fly Front & Front Storm Flaps** - The under fly front shall be fitted with two injection molded slide fasteners, length as specified in Para. 4.1.9. One is for the front closure and one is for the attachment of the removable fleece. The jacket front slide fastener, as specified in Para. 4.1.9.1, shall be inserted in a way to have the slider and retaining box on the left front with a ribbon pull as specified in Para. 4.3.12 and the insert pin attached on the right front. The left front storm flap shall have five dome fasteners (female portion) as specified in Para. 4.1.14, which align with the male portions attached to the right front storm flap as per drawing # 3. There shall be ½ (half) of a slide fastener attached to the right facing and ½ (half) of a slide fastener attached to the left facing to be used for the attachment of a removable fleece jacket. The ½ (half) attached to the front right inside facing, as specified in Para. 4.1.9.2, shall consist of the retaining box and slider which shall begin 2 cm below the collar seam for all sizes. The ½ (half) attached to the left inside front as specified in Para. 4.1.9.3 shall consist of the insert pin and begin 2 cm below the collar seam for all sizes, as shown in drawing # 3. The bottom ends of all the slide fasteners shall be bar tacked as per drawing # 3. An external pen pocket measuring 2 cm after folding in half shall be constructed from a single layer of shell material. It shall be sewn to the left chest only directly under the top storm flap between the front slide fastener and storm flap. The pen pocket shall be dimensioned and positioned as per the patterns and drawing # 3.
- 4.3.3 **Side Seams** - Both side seams from sleeve underarm to hem shall be equipped with a water-resistant slide fastener as specified in Para. 4.1.9.6, and lengths as specified in Para. 4.1.9 and the bottom ends of the slide fasteners shall be bar tacked as per drawings # 3 & # 5. The slide fastener, when applied, shall be covered by the shell material. There shall be 3 sliders, the two closest to the underarm should be in a head to head position and the third shall be opening from the bottom upwards as shown in drawing # 5. All sliders shall be equipped with ribbon pulls as specified in Para. 4.3.12. The seam tape, when applied, shall extend into the front and back hem facing so that no tape ends are visible as shown in drawing # 3. The side seam hem shall have an elastic closure strap as specified in Para. 4.3.13, measuring 2.5 cm wide constructed as per drawing # 5.
- 4.3.4 **Collar** - The collar, made of material as specified in Para. 4.1.2, is to be designed as per the patterns. There shall be three dome fasteners (male portion) as specified in Para. 4.1.14 for the attachment of the detachable hood.
- 4.3.5 **Detachable Hood** - The hood shall be constructed from shell material as specified in Para. 4.1.2, with all sewn seams, seam-sealed. It shall be constructed in a way

to have double adjustment for height and width, with an elastic drawcord as specified in Para. 4.1.11 and large size cord locks as specified in Para. 4.1.12.2. The hood shall be secured to the collar with 3 (three) dome fasteners as specified in Para. 4.1.14 with the female portion applied to the hood and the corresponding male portion to the collar. Eyelets as per Para. 4.1.13 shall be applied to each side of the hood side fronts for the insertion of the elastic drawcord. The elastic drawcord shall be threaded through the inside channel continuing through the eyelet with cord locks applied as per drawing # 4. A label identifying the corresponding hood size shall be sewn to the bottom back facing mid back position or centered on the facing as shown in drawing # 4.

- 4.3.6 **Sleeve & Sleeve Cuffs** - The jacket shall have a three piece sleeve with an upper sleeve pocket constructed from shell material as specified in Para. 4.1.2. All sleeve seams with exception of the underarm seam shall be top stitched using a 2 mm gauge. A dome fastener shall be applied to a piece of 2.5 cm wide grosgrain ribbon which is doubled and sewn securely to the cuff/sleeve seam for the attachment of the liner as shown in drawing # 5. The sleeves shall have a 9 cm adjustment strap with a 4.5 cm x 2.5 cm piece of hook tape as specified in Para. 4.1.10 for adjustability. The cuff shall be 4 cm wide with a 12 cm x 2.5 cm piece loop tape to secure the adjustment strap. The cuff shall be partially elasticized using 4 cm wide elastic as specified in Para. 4.1.15. The elasticized area of the cuff shall have two rows of top stitching to anchor the elastic. The sleeves and cuffs shall be shaped and dimensioned as per the patterns and viewing sample.
- 4.3.7 **Shoulder Straps** – The shoulder straps shaped and dimensioned in accordance with the patterns and drawing # 4, shall be made from two layers of shell material as specified in Para. 4.1.2. They shall be sewn into the sleeve-head and positioned as per the pattern and viewing sample. The shoulder strap shall be secured to the jacket shoulder with the dome fastener specified in Para. 4.1.14.
- 4.3.8 **Upper Sleeve Pocket** - Both sleeves shall have an upper sleeve pocket constructed from shell material with a slide fastener as specified in Para. 4.1.9.5. When in a closed position, the slider shall be facing toward the shoulder as shown in drawing # 2. Ribbon pulls as specified in Para. 4.3.12 shall be applied to the sliders. There shall be two rows of topstitching around the slide fastener, using 2 mm gauge and 6 mm gauge. The sleeve pocket shall be sewn to the sleeve, top-stitched using a 2 mm gauge and seam sealed appropriately to ensure waterproofness. The upper sleeve pocket shall be constructed in accordance with the patterns and drawings of this specification.

- 4.3.9 **'Hide Away' Reflective Police Patches** - The front and back 'hide away' patches shall be constructed of a single layer of shell material folded in half with raw ends turned inside and sewn. The finished length of the front 'hide away' shall be 13 cm x 6.5 cm wide and the back "hide away" shall be 30.5 cm x 10 cm with a reflective police patch as specified in Para. 4.1.6. Both ends of the police patch shall be folded under and applied to the top of the hide away pull-down. Both 'hide away' patches shall have loop tape as specified in Para. 4.1.10 attached to the back side for the patch to be concealed in a "hide away" position. All "hide away" patches shall be constructed as per drawing # 6.
- 4.3.10 **Shoulder Badges** - The RCMP shoulder badges specified in Para. 4.1.7 shall be sewn through the upper sleeve pocket only (not through the sleeve). The badge is to be centered on the sleeve-head 2.5 cm below the sleeve-head seam and attached with one row of stitching, as per the viewing sample.
- 4.3.11 **Coat Hanger** - A 6 cm long coat hanger, constructed from 6 mm wide grosgrain ribbon as specified in Para. 4.1.16 shall be centered at the neck in accordance with the viewing sample.
- 4.3.12 **Slide Fastener Ribbon Pulls** – All ribbon pulls shall be constructed with grosgrain ribbon 1 cm wide, as specified in Para. 4.1.16. The ribbon shall applied to the hole of the slide fastener pull in a way that allows the ribbon pulls to be removed easily without damage and reapplied. The ribbon pull should be 5 cm ± 0.5 cm in length when finished and attached to the slide fastener.
- 4.3.13 **Side Seam Closure Strap** - There shall be a side seam closure strap measuring 9 cm ± .5 cm when finished, at the side seam hem. It shall be constructed from 2.5 cm wide elastic as specified in Para. 4.1.15, doubled and shall be sewn to the lower back side seam flipping toward the front, equipped with a female dome fastener for closure. The corresponding male dome fastener shall be applied to the jacket front at the hem.
- 4.3.14 **Identification Label** - Each jacket shall have a durable blank label 7.5 cm x 2 cm applied separately below the marking and cleaning label used for the inscription of the wearers' name.
- 4.3.15 **Marking & Cleaning Instructions Label** - Each jacket shall have a durable label positioned and sewn to the bottom of the inside pocket bag as shown in drawing # 3. The label information shall be as outlined below in a text no less than a size 8 font. The text shall be of permanent inks of a contrasting colour and shall withstand

at least 50 washes showing no apparent change in appearance. The label shall be completed in accordance with the following information in English and French.

1. Item name in English as written in para. 1.1.
2. Item name in French as written in para. 1.1.
3. RCMP stock number - reference contract documents. (Ex. 4010 000)
4. Size and height group of the article, combining the size designation referenced in the English and French contract documents. (Ex. L/R - G/R)
5. Date of manufacture, in numeric format year/month (Ex. 2001/11)
6. Your manufacturer identification (Company name or number).
7. Print information as shown below.
8. Print information as shown below.
9. Print information as shown below.
10. Print information as shown below.
11. Print information as shown below.
12. Print information as shown below.

1		
2		
3		
4		
5		
6		
7	Machine wash - warm (40°C)	Laver à la machine – à l’eau tiède (40°C)
8	Do Not use fabric softener or chlorine bleach	Ne pas utiliser d’agent adoucissant ni d’agent de blanchiment
9	Tumble dry- medium (Do Not use dryer sheets)	Séchage par culbutage – à température moyenne (Ne pas utiliser d’assouplissant en feuilles)
10	Steam iron - low	Repassage à vapeur - à température basse
11	Dry clean - If professionally dry cleaned request clear distilled solvent rinse; request spray repellent.	Nettoyer à sec – demander un rinçage avec un solvant distillé clair et un traitement à l’aide d’un produit hydrofuge en aérosol.
12	Further care instructions: See Ordering Guide.	Instructions d’entretien supplémentaires: Voir le guide de commande.

Note: The manufacturer’s identification shall not appear anywhere on the garment except on the garment label as indicated.

- 4.3.16 **Instruction Sheet** - Each completed jacket shall have an instruction sheet folded and inserted into the inside chest pocket bag, with the information included in Appendix ‘B’ English and French, forming a part of this specification.

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 RCMP, Uniform and 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 RCMP, Uniform and Equipment Program that conformity to this specification of manufacturing processes is assured. The contractor must use any independent, North American, ISO 9001 certified and ISO 17025 "Textile" certified testing facilities. Note: CTT Group Inc., Quebec, is known to meet this requirement.
- 5.2 The RCMP, Uniform and Equipment Program reserve 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. **Scale of Measurement Definitions and Location References**

(Refer to the Scale of Measurements and Drawing No. 1).

- 6.1 **Chest Circumference (total circumference)** - When placed flat, the chest circumference shall be the distance across the jacket, measured at the lowest point of the armholes. The result shall be doubled to measure total circumference. (A).
- 6.2 **Bottom Circumference (total circumference)** - When placed flat, the bottom shall be measured across the jacket bottom. The result shall be doubled to measure total circumference. (B).
- 6.3 **Front Length** - The length shall be the distance measured from the top of the collar to the hem at front. (C).
- 6.4 **Side Length** - The length shall be the distance measured from the base of the armhole at the side to the hem. (D).
- 6.5 **Full Shoulder Width** - The distance measured at the shoulder seam from neckline to armhole. (E).
- 6.6 **Sleeve Length Overarm** - The overarm sleeve length shall be the distance from the armhole at the shoulder seam to the bottom edge of the sleeve cuff. (F).
- 6.7 **Sleeve Length Underarm** - The underarm sleeve length shall be the distance under sleeve from the armhole to the bottom edge of the sleeve cuff. (G).
- 6.8 **Sleeve Cuff Circumference (Relaxed)** - The sleeve cuff shall be measured at the bottom edge of the sleeve. The result shall be doubled to measure total circumference. (H).
- 6.9 **Elbow Circumference** - The elbow shall be measured across the width of the sleeve in line with the seam of the sleeve patch. The result shall be doubled to measure total circumference. (J).
- 6.10 **Back Length** - The length shall be the distance measured from the bottom of the collar at the back to the hem. (K).
- 6.11 **Back Width** - When placed flat, the distance measured across the back from armhole to armhole at the yoke seam. (L).
- 6.12 **Collar Length** – The collar length shall be measured along the seam from slide fastener to slide fastener. (M).

SCALE OF MEASUREMENTS – Jacket Patrol Unisex

GARMENT MEASUREMENTS																
SIZE DESIGNATION		BODY MEASUREMENTS			Chest Circumference	Bottom Circumference	Front Length (top of collar to hem)	Side Seam Length (underarm to hem)	Full Shoulder Width (Shoulder seam from neckline to armhole)	Sleeve Length		Cuff Circumference	Elbow Circumference	Back Length (bottom of collar at back to hem)	Back Width	Collar Length (zipper to zipper)
Height Group	Size	Inches	Chest	Inches						Overarm (Shoulder seam to cuff)	Overarm (Shoulder seam to cuff)					
X Short	XXS	31" - 33"	79 - 84	109	96.5	48	20	14	51	50	24	44.5	56	39.5	47	
	XS	34" - 36"	86 - 91	116.5	104	50	21	15	53	51	25	47	58	42.5	49	
	S	37" - 39"	94 - 99	124	111.5	52	22	16	55	52	26	49.5	60	45.5	51	
	M	40" - 42"	102 - 107	131.5	119	54	23	17	57	53	27	52	62	48.5	53	
	L	43" - 45"	109 - 114	139	126.5	56	24	18	59	54	28	54.5	64	51.5	55	
	XL	46" - 48"	117 - 122	146.5	134	58	25	19	61	55	29	57	66	54.5	57	
	2XL	49" - 51"	124 - 129	154	141.5	60	26	20	63	56	30	59.5	68	57.5	59	
	3XL	52" - 54"	132 - 137	161.5	149	62	27	21	65	57	31	62	70	60.5	61	
	4XL	55" - 57"	140 - 145	169	156.5	64	28	22	67	58	32	64.5	72	63.5	63	
	5XL	58" - 60"	147 - 152	176.5	164	66	29	23	69	59	33	67	74	66.5	65	
Short	XXS	31" - 33"	79 - 84	109	96.5	53	25	14	55	54	24	44.5	61	39.5	47	
	XS	34" - 36"	86 - 91	116.5	104	55	26	15	57	55	25	47	63	42.5	49	
	S	37" - 39"	94 - 99	124	111.5	57	27	16	59	56	26	49.5	65	45.5	51	
	M	40" - 42"	102 - 107	131.5	119	59	28	17	61	57	27	52	67	48.5	53	
	L	43" - 45"	109 - 114	139	126.5	61	29	18	63	58	28	54.5	69	51.5	55	
	XL	46" - 48"	117 - 122	146.5	134	63	30	19	65	59	29	57	71	54.5	57	
	2XL	49" - 51"	124 - 129	154	141.5	65	31	20	67	60	30	59.5	73	57.5	59	
	3XL	52" - 54"	132 - 137	161.5	149	67	32	21	69	61	31	62	75	60.5	61	
	4XL	55" - 57"	140 - 145	169	156.5	69	33	22	71	62	32	64.5	77	63.5	63	
	5XL	58" - 60"	147 - 152	176.5	164	71	34	23	73	63	33	67	79	66.5	65	
MEASUREMENT LOCATION					A	B	C	D	E	F	G	H	J	K	L	M
TOLERANCES±					3 cm	3 cm	2 cm	1.5 cm	1 cm	1.5 cm	1 cm	2 cm	2 cm	1 cm	1 cm	1 cm

GARMENT MEASUREMENTS																
SIZE DESIGNATION		BODY MEASUREMENTS		Chest Circumference	Bottom Circumference	Front Length (top of collar to hem)	Side Seam Length (underarm to hem)	Full Shoulder Width (Shoulder seam from neckline to armhole)	Sleeve Length		Cuff Circumference	Elbow Circumference	Back Length (Bottom of collar at back to hem)	Back Width	Collar Length (zipper to zipper)	
Height Group	Size	Inches	Inches						Overarm (Shoulder seam to cuff)	Underarm (Underarm seam to cuff)						
Regular	XXS	31" - 33"	79 - 84	109	96.5	58	30	14	59	58	24	44.5	66	39.5	47	
	XS	34" - 36"	86 - 91	116.5	104	60	31	15	61	59	25	47	68	42.5	49	
	S	37" - 39"	94 - 99	124	111.5	62	32	16	63	60	26	49.5	70	45.5	51	
	M	40" - 42"	102 - 107	131.5	119	64	33	17	65	61	27	52	72	48.5	53	
	L	43" - 45"	109 - 114	139	126.5	66	34	18	67	62	28	54.5	74	51.5	55	
	XL	46" - 48"	117 - 122	146.5	134	68	35	19	69	63	29	57	76	54.5	57	
	2XL	49" - 51"	124 - 129	154	141.5	70	36	20	71	64	30	59.5	78	57.5	59	
	3XL	52" - 54"	132 - 137	161.5	149	72	37	21	73	65	31	62	80	60.5	61	
	4XL	55" - 57"	140 - 145	169	156.5	74	38	22	75	66	32	64.5	82	63.5	63	
	5XL	58" - 60"	147 - 152	176.5	164	76	39	23	77	67	33	67	84	66.5	65	
	Tall	XXS	31" - 33"	79 - 84	109	96.5	63	35	14	63	62	24	44.5	71	39.5	47
		XS	34" - 36"	86 - 91	116.5	104	65	36	15	65	63	25	47	73	42.5	49
S		37" - 39"	94 - 99	124	111.5	67	37	16	67	64	26	49.5	75	45.5	51	
M		40" - 42"	102 - 107	131.5	119	69	38	17	69	65	27	52	77	48.5	53	
L		43" - 45"	109 - 114	139	126.5	71	39	18	71	66	28	54.5	79	51.5	55	
XL		46" - 48"	117 - 122	146.5	134	73	40	19	73	67	29	57	81	54.5	57	
2XL		49" - 51"	124 - 129	154	141.5	75	41	20	75	68	30	59.5	83	57.5	59	
3XL		52" - 54"	132 - 137	161.5	149	77	42	21	77	69	31	62	85	60.5	61	
4XL		55" - 57"	140 - 145	169	156.5	79	43	22	79	70	32	64.5	87	63.5	63	
5XL		58" - 60"	147 - 152	176.5	164	81	44	23	81	71	33	67	89	66.5	65	
MEASUREMENT LOCATION				A	B	C	D	E	F	G	H	J	K	L	M	
TOLERANCES±				3 cm	3 cm	2 cm	1.5 cm	1 cm	1.5 cm	1 cm	2 cm	2 cm	1 cm	1 cm	1 cm	

SIZE DESIGNATION			BODY MEASUREMENTS		GARMENT MEASUREMENTS												
Height Group	Size	Chest		Chest Circumference	Front Length (top of collar to hem)	Side Seam Length (underarm to hem)	Full Shoulder Width (Shoulder seam from neckline to armhole)	Sleeve Length		Cuff Circumference	Elbow Circumference	Back Length (Bottom of collar at back to hem)	Back Width	Collar Length (zipper to zipper)			
		Inches	Inches					Overarm (Shoulder seam to cuff)	Underarm (Underarm seam to cuff)								
X Tall	XXS	31" - 33"	79 - 84	109	68	40	14	67	66	24	44.5	76	39.5	47			
	XS	34" - 36"	86 - 91	116.5	70	41	15	69	67	25	47	78	42.5	49			
	S	37" - 39"	94 - 99	124	72	42	16	71	68	26	49.5	80	45.5	51			
	M	40" - 42"	102 - 107	131.5	74	43	17	73	69	27	52	82	48.5	53			
	L	43" - 45"	109 - 114	139	76	44	18	75	70	28	54.5	84	51.5	55			
	XL	46" - 48"	117 - 122	146.5	78	45	19	77	71	29	57	86	54.5	57			
	2XL	49" - 51"	124 - 129	154	80	46	20	79	72	30	59.5	88	57.5	59			
	3XL	52" - 54"	132 - 137	161.5	82	47	21	81	73	31	62	90	60.5	61			
	4XL	55" - 57"	140 - 145	169	84	48	22	83	74	32	64.5	92	63.5	63			
	5XL	58" - 60"	147 - 152	176.5	86	49	23	85	75	33	67	94	66.5	65			
XX Tall	XXS	31" - 33"	79 - 84	109	73	45	14	71	70	24	44.5	81	39.5	47			
	XS	34" - 36"	86 - 91	116.5	75	46	15	73	71	25	47	83	42.5	49			
	S	37" - 39"	94 - 99	124	77	47	16	75	72	26	49.5	85	45.5	51			
	M	40" - 42"	102 - 107	131.5	79	48	17	77	73	27	52	87	48.5	53			
	L	43" - 45"	109 - 114	139	81	49	18	79	74	28	54.5	89	51.5	55			
	XL	46" - 48"	117 - 122	146.5	83	50	19	81	75	29	57	91	54.5	57			
	2XL	49" - 51"	124 - 129	154	85	51	20	83	76	30	59.5	93	57.5	59			
	3XL	52" - 54"	132 - 137	161.5	87	52	21	85	77	31	62	95	60.5	61			
	4XL	55" - 57"	140 - 145	169	89	53	22	87	78	32	64.5	97	63.5	63			
	5XL	58" - 60"	147 - 152	176.5	91	54	23	89	79	33	67	99	66.5	65			
MEASUREMENT LOCATION					A	B	C	D	E	F	G	H	J	K	L	M	
TOLERANCES±					3 cm	3 cm	2 cm	1.5 cm	1 cm	1.5 cm	1.5 cm	1 cm	2 cm	2 cm	1 cm	1 cm	1 cm

NOTE: All dimensions are in centimeters unless otherwise indicated.

TABLE I
Properties of Laminated Shell Material (with WMVP membrane & tricot backing)

	Test	Test Method	Duration	Min. Value Shell Material I
1	Resistance of Materials to Water Vapour Diffusion	CAN CGSB 4.2 Method 49-M99, Option 1 *See test procedure #1	- Initial - After 5 launderings - After ageing (70°C & 95% RH for 168 hrs)	13 mm max.
2	Hydrostatic Resistance	CAN CGSB 4.2 Method 26.5 *See test procedure #2	- Initial - After 5 launderings	1240.2 kPa
3	Low Pressure Water Permeability	CAN CGSB 4.2 Method 26.3 * See test procedure #3	- Initial	No Leakage
		ASTM D2097-03 (2010) * See test procedure #4	- After Cold Flex Warp /Fill	No Leakage
		AATCC 135-2012/Test procedure 6 * See test procedure #5	- After 100 hours of Continuous Wet Flex (Agitation)	No Leakage
4	High Pressure Water Permeability	BS 3424: Part 26: 1990 Method 29A * See test procedure #6	- Initial	No Leakage
		BS 3424: Part 26: 1990 Method 29A * See test procedure #7	- After Unleaded Gasoline	No Leakage
		BS 3424: Part 26: 1990 Method 29A * See test procedure #7	- After DEET Insect Repellent	No Leakage
		BS 3424: Part 26: 1990 Method 29A * See test procedure #8	- After Synthetic Perspiration	No Leakage
5	Abrasion Resistance	ASTM D3886-99 (2013) Procedure: use No. 0 Emery Polishing Paper * See test procedure #9	- 3200 Cycles	No failure
SEAMS				
6	Seam Tape Durability	CAN CGSB 4.2 Method 26.3 * See test procedure #10	- Initial	No Leakage

		CAN CGSB 4.2 Method 26.3 ANSI/AATCC 135 * See test procedure #11	- After 10 laundry cycles	No Leakage
		CAN CGSB 4.2 Method 26.3 * See test procedure #12	- After 10 dry-clean cycles	No Leakage
7	Delamination	Visual	- During and after the above procedures in this table	No Delamination
8	Peel Strength N/23 mm	ASTM D413-98		8 N/23mm minimum

TEST PROCEDURES FOR TABLE I

1. The knit side of the laminated cloth shall face the water. The tests shall be completed as outlined in CAN/CGSB 4.2 Method 49-99, Option #1. The samples shall be conditioned at $21^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($69.8^{\circ}\text{F} \pm 2^{\circ}\text{F}$) and relative humidity shall be $65 \pm 2\%$. The test specimen shall be placed approximately equidistant between the dry airflow and the water cell. Four specimens shall be tested per condition. The tests shall be completed initial, after 5 launderings according to ISO 6330-2012 Method 2B-E and after ageing according to ASTM F392/F392M-11.
2. The water pressure shall be applied to the knit side of the laminated cloth. A taffeta fabric restraint conforming to MIL-C-21852F-TYPE III-CLASS1 PART#WJAAGNA should be placed on top of the sample against the face side of the laminated cloth.
3. The knit side of the laminated cloth shall contact the water. The hydrostatic head shall be 13.78 kPa (2.0 psi) and shall be held for 3 minutes. Leakage is defined as the appearance of water any place within the 11.43 cm (4.5") diameter test area. The test may be performed using any device which tests the same specimen area at the equivalent pressure. In case of dispute, the apparatus described in FED-STD-191A Method 5516 shall be used.
4. Ten warp and ten fill specimens 8.26 cm x 11.43 cm (3.25" x 4.5") shall be selected from each sample unit. The 8.26 cm (3.25") dimension is the test direction. Specimens shall be flexed for 20,000 cycles as specified in ASTM D2097-03 (2010) and as follows: Mark the knit side of each specimen with two lines 4.32 cm (1.7") apart and perpendicular to the test direction. The area between the lines is the test area and shall be centered on the knit side of the specimen. Wrap the specimens around fully extended pistons with the knit side out. The test area lines shall meet evenly and shall line up with the edges of the pistons. Clamp in place making sure the clamps are not in the test area. Check specimen for smoothness and tautness (wrinkles cause improper flexing). The distance between the pistons shall be 4.32 cm (1.7") in the open position and 1.27 cm (0.5") in the closed position as measured from the bottom of

the upper piston and top of the lower piston. Place the test apparatus with mounted specimens in a test chamber at $-31.67^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($-25^{\circ}\text{F} \pm 2^{\circ}\text{F}$) for a one hour conditioning period and then flex in the test chamber at $-31.67^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($-25^{\circ}\text{F} \pm 2^{\circ}\text{F}$). After flexing, test for water permeability as in test procedure #3 except that the orifice of the tester shall be modified to accommodate the smaller specimen size

5. One 35.56 cm (14") by full width specimen shall be selected from each sample unit. The specimens shall be agitated using the 'normal' cycle in an automatic home laundering as specified in AATCC 135-2012 except that the machine shall be capable of continuous agitation. The water level shall be maintained at $72.74\ell \pm 4.55\ell$ (16 ± 1 gallons), and the water temperature shall be $32^{\circ}\text{C} \pm 9^{\circ}\text{C}$. The load shall be $.91 \text{ kg} \pm .09 \text{ kg}$ ($2 \text{ lbs} \pm 0.2 \text{ lbs}$). The specimen shall be removed from the washer after 100 hours of continuous agitation. The specimen shall be air dried and then tested for water permeability at three sites across the width of the specimen according to test procedure #3.
6. The water pressure shall be applied to the knit side of the laminated cloth from below the test specimen. The maximum pressure of 172.25 kPa (25 psi) shall be attained in 2 minutes \pm 20 seconds and shall be applied for 5 minutes. Leakage is defined as the appearance of water any place within the test area.
7. Place a 15.24 cm x 15.24 cm (6" x 6") piece of blotting paper on a flat surface and cover with a 25.4 cm x 25.4 cm (10" x 10") test specimen with the face side up. Weigh out $2.0 \text{ gm} \pm 0.1 \text{ gm}$ ($.07 \text{ oz} \pm .004 \text{ oz}$) of solid contaminant or pipette 2.0 ml ($.07 \text{ f. oz}$) of a liquid contaminant. Place the contaminant on the center of the specimen and cover with a 15.24 cm x 15.24 cm (6" x 6") piece of glassine paper. Place a 1.81 kg (4 lbs) weight on the glassine paper directly over the contaminated area. Allow the weight to remain on the specimen for 30 minutes. Remove the weight and glassine paper and allow the specimen to sit undisturbed for an additional 30 minutes. Wipe off any excess contaminant using a fresh piece of blotting paper and test for water permeability as per procedure #6 except that the water pressure shall be applied for 3 minutes.
8. One specimen per sample unit shall be tested for water permeability after exposure to synthetic perspiration. The specimen shall be not less than 15.24 cm (6") in diameter. The test cups shall accommodate this size specimen and shall have a depth of at least 2.5 cm (1"). The cups shall be sealed to prevent leakage. The solution shall contact the knit side of the laminate.

Synthetic perspiration shall be prepared by stirring the following ingredients into 500 ml of distilled water:

3 grams sodium chloride
1 gram predigested protein

1 gram n-propyl propionate
0.5 gram lecithin (phosphatidyl choline)

The predigested protein shall contain the following amino acids:

<u>Ingredient</u>	<u>Milligrams (mg)</u>
Lysine	82.5
Histidine	27.5
Arginine	40.0
Aspartic acid	72.5
Threonine	42.5
Serine	50.0
Glutamic acid	197.5
Proline	92.5
Glycine	22.5
Alanine	28.7
Cystine	4.7
Valine	66.2
Methionine	30.0
Isoleucine	53.8
Leucine	87.5
Tyrosine	51.3
Phenylalanine	48.8
Tryptophan	18.8

The solution shall be stirred continuously and heated to $50 \pm 1^{\circ}\text{C}$, then covered and cooled to approximately 35°C .

The solution shall be stirred such that any solid particles are suspended in solution and poured into the test cup. The cup shall be inverted to allow the synthetic perspiration to evaporate through the specimen.

After the solution has evaporated through the specimen, such that no more than .32 cm (0.125") of solution remains, the specimen shall be removed from the cup, rinsed in warm water, dried and tested for water permeability as specified in test procedure #6 except that the water pressure shall be applied for 3 minutes.

- Method ASTM D3886-99 (2013) Procedure: Use No. 0 Emery Polishing Paper. Side abraded shall be the knit side, with a multidirectional abrasion motion. Change abrasant after each 300 cycles or specimen failure. The air pressure under the diaphragm should be 4 psi, and the load on the abrasant plate should be 1 lb. Failure is determined by breaking of the electrical

contact.

10. A minimum of 3 straight seams and 2 cross-over seams shall be tested prior to laundry cycle testing and remain waterproof (no leakage) when tested at 13.78 kPa (2 psi) for 3 minutes with the seam tape side facing up, away from the water challenge. Leakage is defined as the appearance of water any place within the 11.43 cm (4.5") diameter test area since the seam tape process can damage the fabric adjacent to the tape. Test for water permeability as in procedure #3 except the face fabric shall face the water challenge.
11. A minimum of 3 straight seams and 2 cross-over seams shall be tested after ten (10) home laundry cycles and remain waterproof (no leakage) when tested at 13.78 kPa (2 psi) for 3 minutes with the seam tape side facing up, away from the water challenge. Leakage is defined as the appearance of water any place within the 11.43 cm (4.5") diameter test area since the seam tape process can damage the fabric adjacent to the tape. Test for water permeability as in procedure #3 except the face fabric shall face the water challenge. Laundry testing should be performed in accordance with procedure specified in Machine Cycle 1, Wash Temperature 111, and Drying Procedure Ai of ANSI/AATCC 135-2012.
12. A minimum of 3 straight seams and 2 cross-over seams shall be tested after ten(10) dry clean cycles and remain waterproof (no leakage) when tested a 13.78 kPa (2 psi) for 3 minutes with the seam tape side facing up, away from the water challenge. Leakage is defined as the appearance of water any place within the 11.43 cm (4.5") diameter test area since the seam tape process can damage the fabric adjacent to the tape. Test for water permeability as in procedure #3 except the face fabric shall face the water challenge.

TABLE II
Properties of Laminated Shell Material I (Dark Navy Blue)

REQUIREMENTS			TEST METHODS
1	Mass (Laminated)	205 g/m ² (maximum.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 5.1-M90 (2013) ASTM D3776/D3776M-09a (2013)
2	Colour fastness to Light	Equal to AATCC Standard L5 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 18.3 ISO 105-B02:2014
3	Colour Fastness - To Crocking	Wet: Grey Scale 4 or better Dry: Grey Scale 4 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 22 AATCC 8-2013
4	Colour Fastness - To Laundering	Colour change: Grey Scale 4.5 or better Staining: Grey Scale 3 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 19.1 Test 2A AATCC 61-2013
5	Dimensional Change to Laundering	After 5 cycles: Not exceed $\pm 3\%$ length Not exceed $\pm 3\%$ width	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 58-2004, 3, E AATCC Method 135-2012 (1) (III) (Ai)
6	Breaking Strength - Grab Method	Warp 800 Newton (min.) Weft 800 Newton (min.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 9.2 ASTM D5034-09 (2013)
7	Tearing Strength	Warp 20 Newton (min.) Weft 20 Newton (min.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 12.3 ISO 13937-1:2000 ASTM D1424-09 (2013)
8	Abrasion Resistance - Martindale Method Part 2 (Determination of Specimen Breakdown)	No breakdown after 10,000 at 9 kPa	<ul style="list-style-type: none"> ASTM D4966-12
9	DWR (durable water repellent)	- 100 spray rating. Initial - 90 spray rating. After 5 launderings - 80 spray rating. After 10 launderings	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 26.2 Perma Press washing cycles (Washing Temp. 40°C \pm 3°C) Tumble Dry - Perma Press for 30 minutes as per (AATCC Method 135-2012)
10	Oil Repellent	- 6 Initial - 5 After 5 launderings - 4 After 10 launderings	<ul style="list-style-type: none"> AATCC 118-2013 Perma Press washing cycles (Washing Temp. 40°C \pm 3°C) Tumble Dry - Perma Press for 30 minutes as per (AATCC Method 135-2012)

TABLE III
Mesh, Pocketing

REQUIREMENT			TEST METHODS
1	Colour	Black or Navy To match colour swatch provided by Uniform and Equipment Program	
2	Fiber Content	100% Polyester	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 14-2005
3	Knit Construction	Warp Knit	
4	Yarns per cm	Wales: 13 ± 3 Courses: 11 ± 3	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 7- M88 (2001) ISO 7211-2
5	Mass	$115 \text{ g/m}^2 \pm 6 \text{ g/m}^2$ ($109 \text{ g/m}^2 - 121 \text{ g/m}^2$)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 5.1-M90 (2013) ASTM D3776/D3776M-09a (2013)
6	Dimensional Change to Domestic Washing <i>After 5 cycles</i>	Warp 4% (max.) Weft 3% (max.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 58-2004,3,E
7	Colour fastness to Crocking Wet & Dry	Dry - Grey Scale 4 or better Wet - Grey Scale 4 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 22-2004
8	Colour fastness to Washing	Colour change Grey Scale 4 or better Staining cotton - Grey Scale 4 or better Staining polyester – Grey Scale 4 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 19.1-2004 Test #2 AATCC 61-2013
9	Mullen Burst (psi)	100 (minimum)	<ul style="list-style-type: none"> ASTM D3786/D3786M-13
10	Abrasion Resistance - Martindale Method Part 2 (Determination of Specimen Breakdown)	No breakdown after 25,000 at 9 kPa	<ul style="list-style-type: none"> ASTM D4966-12
11	Pilling	No less than 4 after 120 minutes	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 51.2-M87

APPENDIX A

Sealed Pattern Identifier

Pattern #: G.S. 1045-298

Title: Jacket, Patrol, Unisex

Paper Patterns - Paper patterns are available from the RCMP, Uniform and Equipment Program, Ottawa Ontario, under Pattern # G.S. 1045-298. 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 seam allowances 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. **Punch holes are not an acceptable method of placement for this garment with the exception of the placement of the shoulder badge and the holes must be completely covered by the shoulder badge. Shrinkage has not been included in any pattern piece. It is the responsibility of the manufacturer to make allowances for shrinkage in order to meet the scale of measurements included in this specification.**

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

Pattern Pieces - This design has 42 pattern components.

Legend:

Shell Material I	= Para. 4.1.2
Shell Material I (Tricot RSU)	= Para. 4.1.2 (inside face) Right Side Up
Lining Material	= Para. 4.1.4
Mesh Pocketing	= Para. 4.1.5

Cut 1 Single	= Cut 1
Cut 1 Paired	= Cut 2
Cut 2 Paired	= Cut 4
(RSU)	= Right Side Up

Pattern Components	Nomenclature	Quantity to be cut	Material
# 1 of 42	Back	1 Single	Shell Material I
# 2 of 42	Chest Pocket Zip Stay	1 Paired	Shell Material I
# 3 of 42	Middle Side Front	1 Paired	Shell Material I
# 4 of 42	Middle Front	1 Paired	Shell Material I

Pattern Components	Nomenclature	Quantity to be cut	Material
# 5 of 42	Lower Front	1 Paired	Shell Material I
# 6 of 42	Under Fly Front	1 Paired	Shell Material I
# 7 of 42	Storm Flap - Left	1 Single	Shell Material I (RSU)
# 8 of 42	Storm Flap - Right	1 Single	Shell Material I (RSU)
# 9 of 42	Shoulder Strap	2 Paired	Shell Material I
#10 of 42	Front Facing "A"	1 Paired	Shell Material I
# 11 of 42	Front Facing "B"	1 Paired	Shell Material
# 12 of 42	Sleeve	1 Paired	Shell Material I
# 13 of 42	Sleeve - Upper Back	1 Paired	Shell Material I
# 14 of 42	Sleeve - Lower Back	1 Paired	Shell Material I
# 15 of 42	Cuff	1 Paired	Shell Material I
# 16 of 42	Elasticized Cuff	1 Paired	Shell Material I
# 17 of 42	Cuff Adjustment Strap	1 Paired	Shell Material I
# 18 of 42	Top Collar	1 Single	Shell Material I
# 19 of 42	Under Collar	1 Single	Shell Material I
# 20 of 42	Hood Side	1 Paired	Shell Material I
# 21 of 42	Hood Center	1 Single	Shell Material I
# 22 of 42	Hood Back	1 Single	Shell Material I
# 23 of 42	Hem Facing - Front	1 Paired	Shell Material I
# 24 of 42	Hem Facing - Back	1 Single	Shell Material I
# 25 of 42	Top Collar Stand	1 Single	Shell Material I (Tricot RSU)
# 26 of 42	Hood Facing - Inside Front	1 Paired	Shell Material I (Tricot RSU)
# 27 of 42	Hood Facing - Inside Back	1 Single	Shell Material (Tricot RSU)
# 28 of 42	Yoke Facing - Front	1 Paired	Shell Material I
# 29 of 42	Yoke Front - Right	1 Single	Shell Material I

Pattern Components	Nomenclature	Quantity to be cut	Material
# 30 of 42	Yoke Front - Left	1 Single	Shell Material I
# 31 of 42	Yoke Back	1 Single	Shell Material I
# 32 of 42	Hideaway Police Patch - Back	1 Single	Shell Material I (RSU)
# 33 of 42	Hideaway Police Patch - Front	1 Single	Shell Material I (RSU)
# 34 of 42	Pen Loop	1 Single	Shell Material I
# 35 of 42	Pocket - Upper Sleeve	1 Paired	Shell Material I
# 36 of 42	Pocket Bag- Lower Pocket 'A'	1 Paired	Mesh Pocketing
# 37 of 42	Pocket Bag- Lower Pocket 'B'	1 Paired	Mesh Pocketing
# 38 of 42	Pocket Bag - Inside Chest	1 Paired	Mesh Pocketing
# 39 of 42	Pocket Bag - Chest 'A'	1 Paired	Mesh Pocketing
# 40 of 42	Pocket Bag - Chest 'B'	1 Paired	Mesh Pocketing
# 41 of 42	Pocket Bag - Attachment	1 Paired	Mesh Pocketing
# 42 of 42	Yoke - Inside Back	1 Single	Lining

APPENDIX B

CARE INSTRUCTIONS

Applicable To:

Jacket Patrol Unisex

Jacket High Visibility

Parka Inclement & Hood Cold Weather (without the fur trim)

Trouser Inclement

These garments are designed to be both waterproof and water repellent. The best way to maintain its performance is to **keep them clean by washing it regularly**. When the water no longer beads up and rolls off, use a water based, solvent free, nonflammable DWR product to restore the water repellency. The following care instructions should ensure a normal life cycle for your garments. These garments should be washed after 10-12 days of continuous use or every 20-30 days with occasional use.

The water repellency, waterproofness and breathability of your garment are affected by the following;

1. Dirt buildup and other contaminants including oils, sunscreen and sweat reduce the effectiveness of the water repellency.
2. Fabric softeners have a detrimental effect on the colour and the waterproofness and water repellency of the fabric. They will make the colour fade more quickly and affect the overall performance of the fabric. These include liquid fabric softeners, detergents that contain softeners and dryer sheets. Therefore it is very important that these softeners not be used when laundering your garment.

Machine Wash:

- DO NOT COMMERCIAL LAUNDRER
- DO NOT WASH FUR

Close all zippers, fasteners and velcro before washing.

Wash in warm water separately, without detergent. **DO NOT USE FABRIC SOFTENERS OR POWDERED DETERGENTS OR ANY LIQUID DETERGENTS THAT CONTAIN FABRIC SOFTENERS. DO NOT USE BLEACH.**

If heavily soiled, a small amount of detergent or specialty wash products (**i.e. Grangers® Performance Wash, Fibertec Pro Wash or ReviveX® Synthetic fabric cleaner**) for waterproof garments may be used.

At the end of the final rinse cycle, re-adjust the garment in the washer, and put it through an additional rinse cycle. This will assure complete rinsing of detergent that may have been trapped during washing, therefore preserving water repellency.

Drying:

Close all zippers, fasteners and velcro before drying.

If re-application of DWR is necessary, hang wet garment on hanger and follow application instructions of DWR product. (**i.e. Grangers® XT Waterproof spray, Fibertec Blue Guard Spray-on, Revivex® Spray-On or Nikwax Tx-Direct™**)

The garment **must** be tumble dried separately on a warm setting for 50 minutes to reactivate the durable water repellency (DWR.). **DO NOT USE DRYER SHEETS.**

If necessary, touch up with steam iron at low temperature.

Dry Cleaning:

If dry cleaned, request clear distilled solvent rinse and DWR spray repellent.

INSTRUCTIONS D'ENTRETIEN

Applicable à :

Blouson de patrouille unisexe

Veste haute visibilité

Parka pour intempéries et capuchon pour temps froid (sans la bordure de fourrure)

Pantalon pour intempéries

Ces vêtements sont conçus pour être imperméables et déperlants. La meilleure façon de préserver leurs propriétés est de les **garder propres en les lavant régulièrement**. Lorsque l'eau ne perle plus, utiliser un produit déperlant durable à base d'eau, sans solvant et ininflammable pour restaurer la déperlance. Les instructions d'entretien ci-dessous permettront d'assurer le rendement optimal des vêtements. Ces vêtements devraient être lavés après 10 à 12 jours d'utilisation continue ou à tous les 20 à 30 jours d'utilisation occasionnelle.

Les conditions suivantes peuvent influencer sur l'imperméabilité, la déperlance et la respirabilité des vêtements :

1. L'accumulation de saletés et d'autres contaminants comme de l'huile, de la crème solaire ou de la sueur peut réduire l'imperméabilité.
2. Les agents assouplissants influent sur la couleur, la déperlance et l'imperméabilité. Ils décolorent les tissus plus rapidement et nuisent à leur rendement général. Il est très important de n'utiliser **aucun** type d'assouplissant (agent assouplissant liquide, détergent avec assouplissant et assouplissant en feuilles).

Lavage à la machine :

- NE PAS LAVER DANS UNE BUANDERIE COMMERCIALE
- NE PAS LAVER LA FOURRURE

Fermer toutes les fermetures à glissière, les attaches et les attaches à ruban autoagrippant avant de laver.

Laver séparément à l'eau tiède, sans détergent. **NE PAS UTILISER D'AGENT ASSOUPLISSANT NI DE DÉTERGENT EN POUDRE OU LIQUIDE AVEC ASSOUPLISSANT. NE PAS UTILISER D'AGENT DE BLANCHIMENT.**

Si le vêtement est très sale, une petite quantité de détergent ou de produit spécifiquement conçu pour l'entretien des vêtements imperméables (**p. ex. nettoyant haute performance de Granger's^{MD}, produit Pro Wash de Fibertec ou nettoyant pour tissus synthétiques ReviveX^{MD}**) peut être utilisée.

À la fin du dernier cycle de rinçage, replacer le vêtement dans la machine et entreprendre un autre cycle de rinçage, afin d'éliminer complètement le détergent qui peut être resté durant le lavage et de préserver la déperlance.

Séchage:

Fermer toutes les fermetures à glissière, les attaches et les attaches à ruban autoagrippant avant de sécher.

Si un nouveau traitement déperlant est requis, suspendre le vêtement mouillé sur un cintre et suivre les instructions du fabricant du produit (**p. ex. imperméabilisant à vaporiser XT de Granger's^{MD}, Blue Guard de Fibertec, Revivex^{MD} ou Tx-Direct^{MC} de Nikwax**).

Le vêtement **doit** être séché séparément par culbutage à basse température pendant 50 minutes, afin de réactiver les propriétés déperlantes. **NE PAS UTILISER D'ASSOUPLISSANT EN FEUILLES.**

Au besoin, repasser légèrement à basse température.

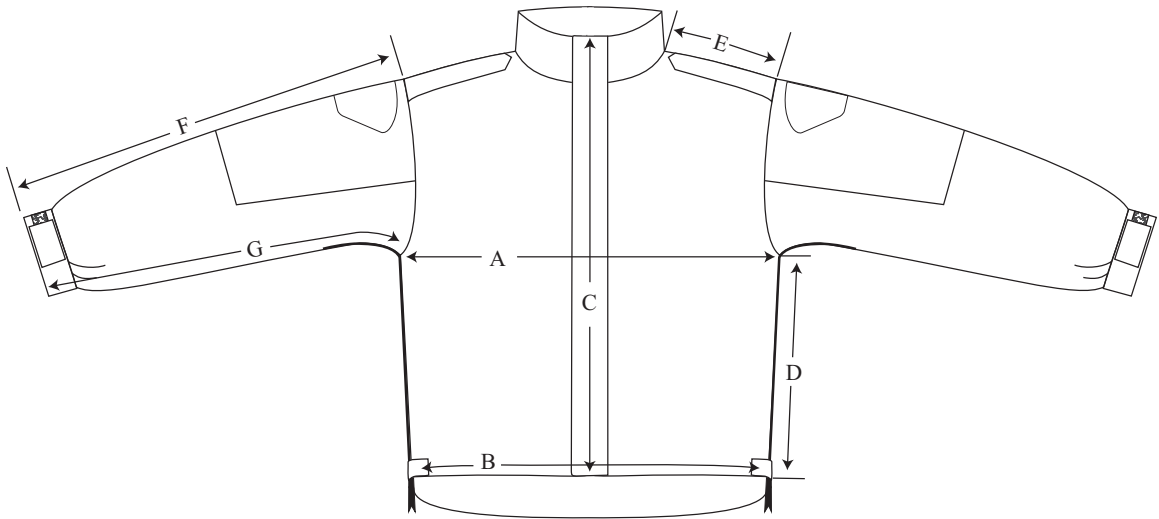
Nettoyage à sec :

Si le vêtement est nettoyé à sec, demander un rinçage avec un solvant distillé clair et un traitement à l'aide d'un produit déperlant à vaporiser.

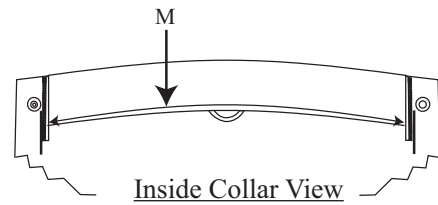
Jacket, Patrol, Unisex
Measurement Location Chart

G.S.1045-298

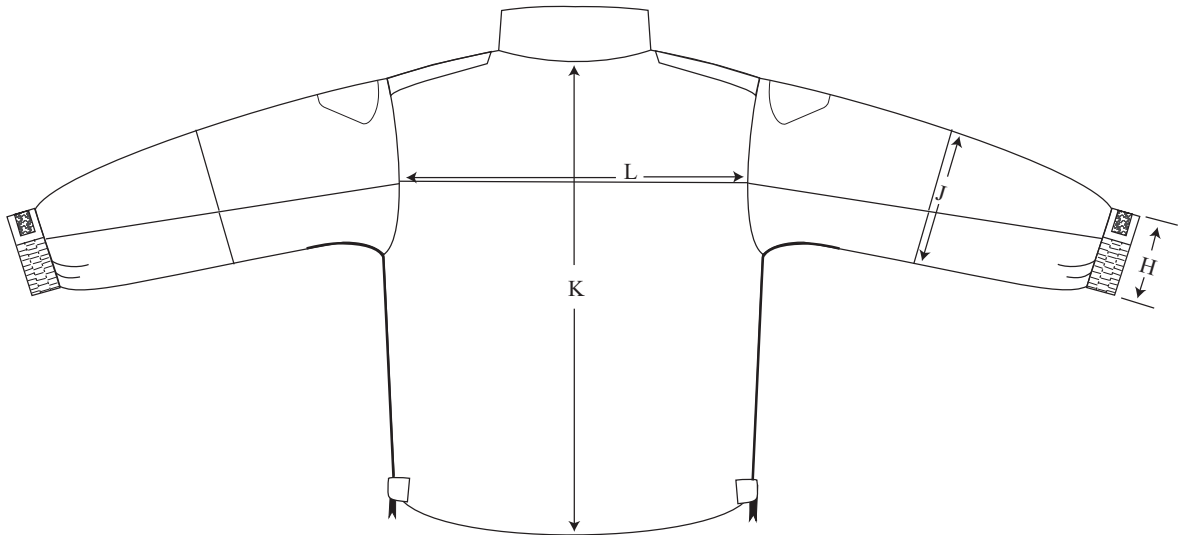
Dwg. 1



Front View



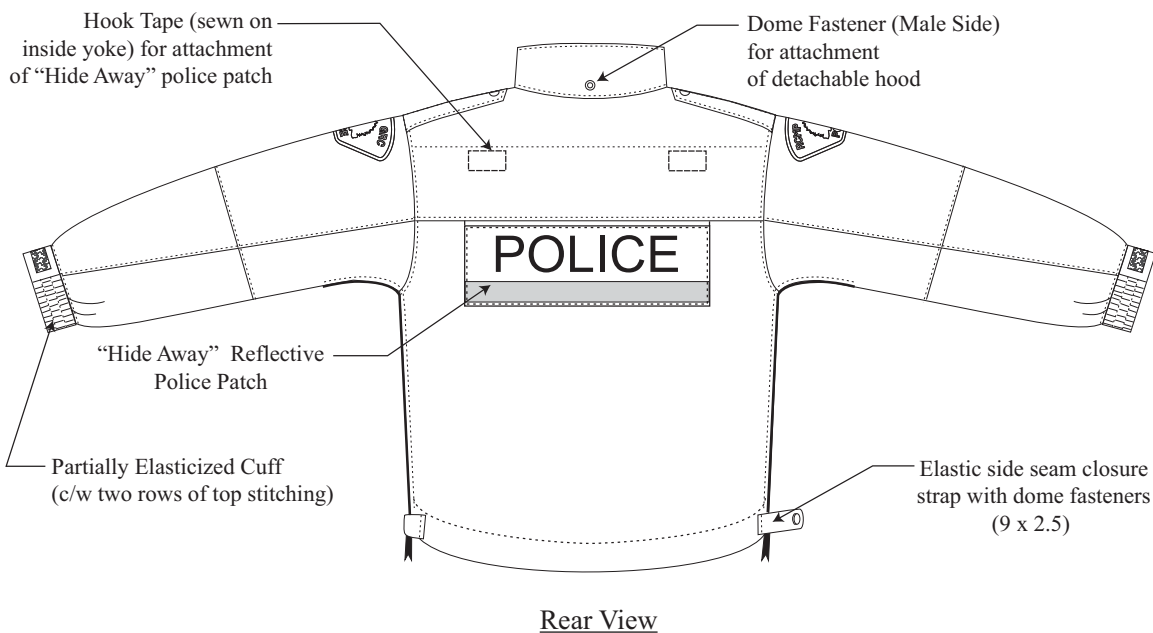
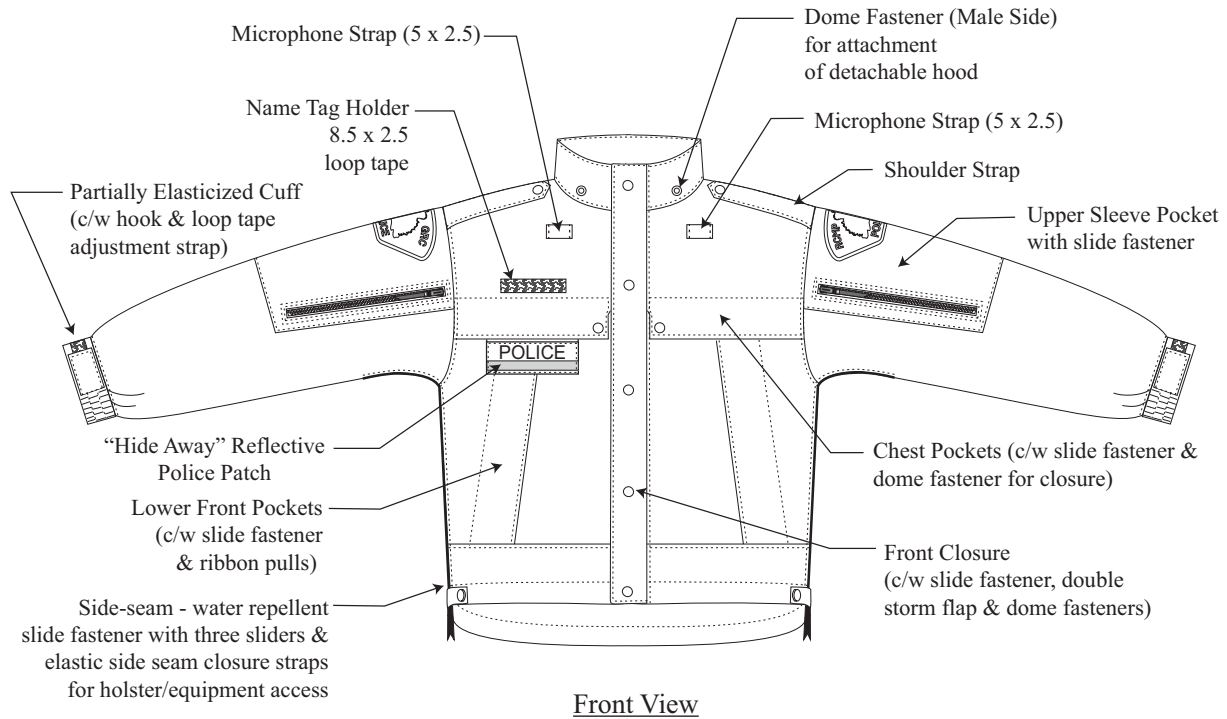
Inside Collar View



Rear View

NOT TO SCALE

Dwg. 2



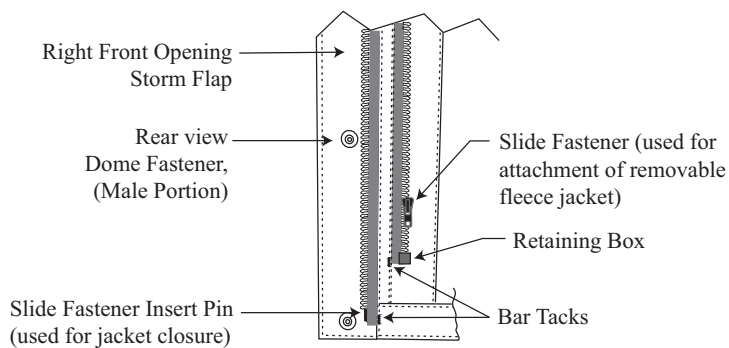
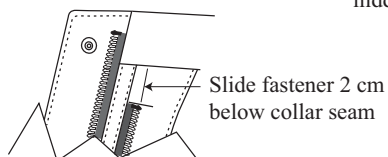
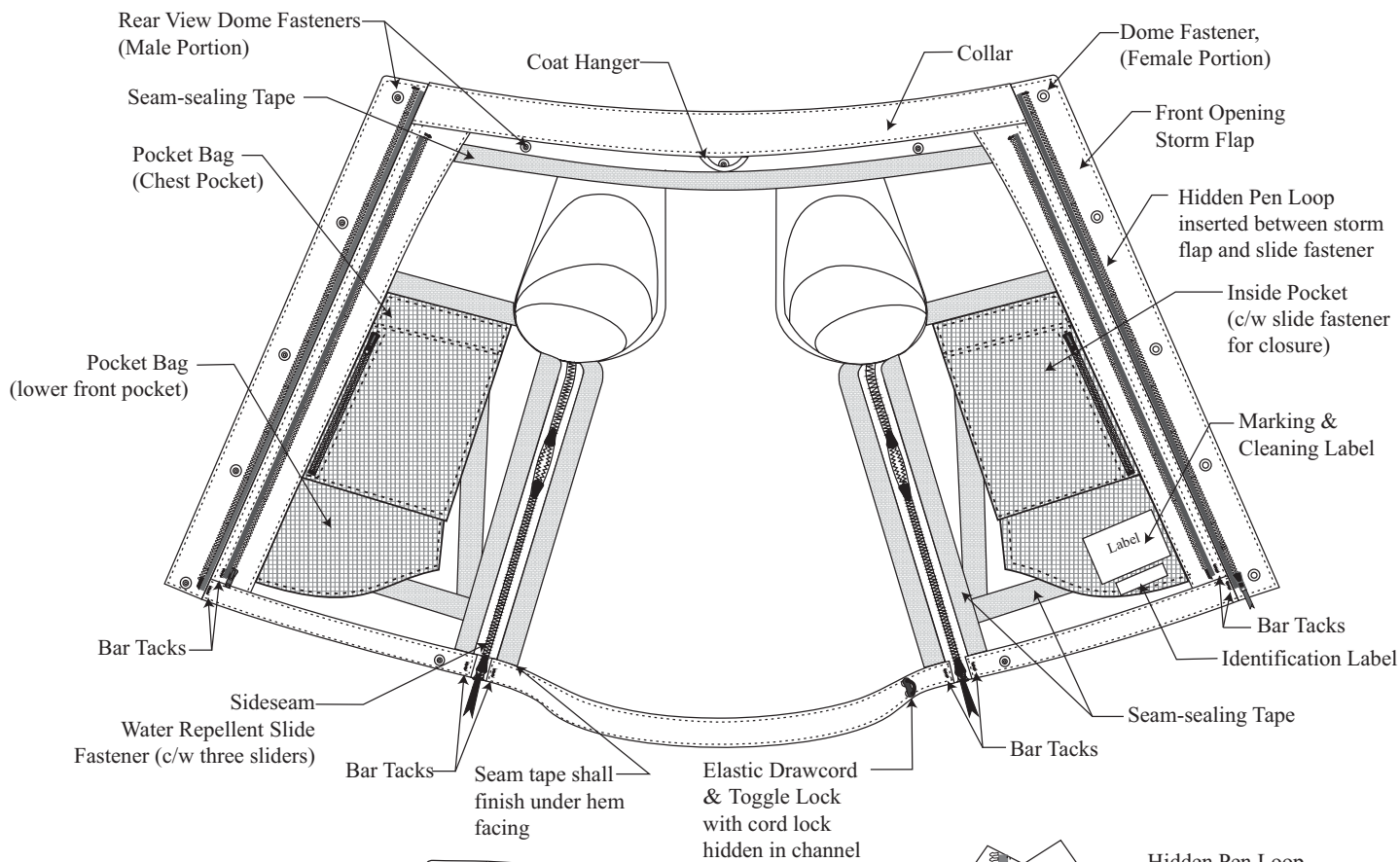
NOT TO SCALE

All measurements are shown in centimeters.

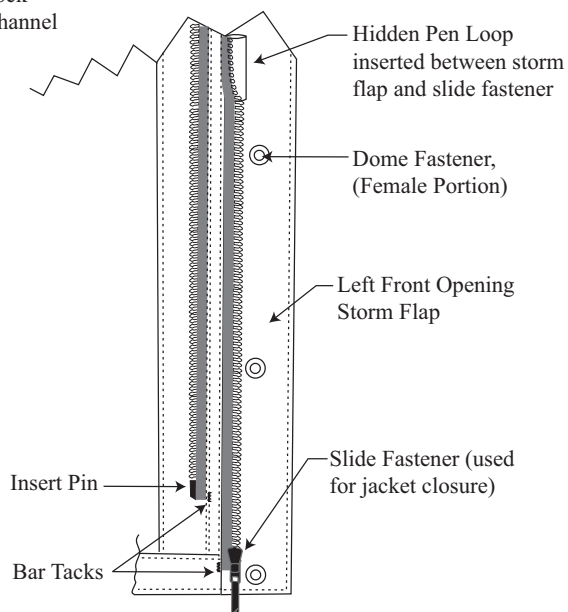
± 0.5 cm tolerance acceptable unless otherwise indicated.

Inside Jacket & Slide Fastener Detail

Dwg. 3



Slide Fastener Detail
Right Front (Inside View)



Slide Fastener Detail
Left Front (Inside View)

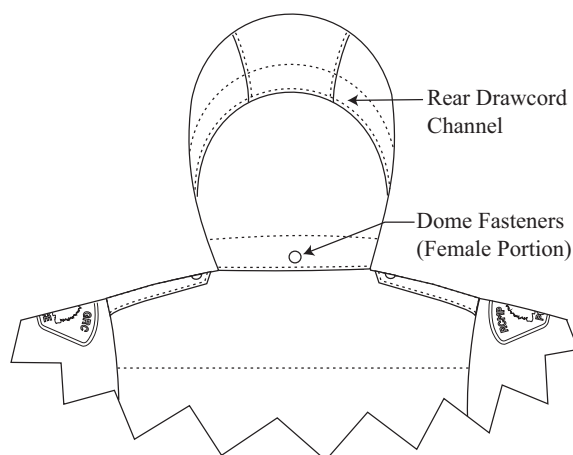
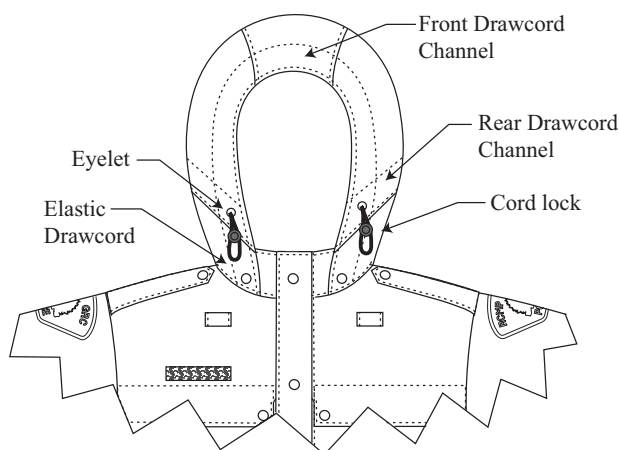
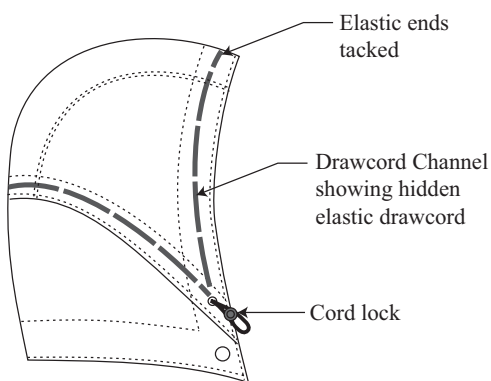
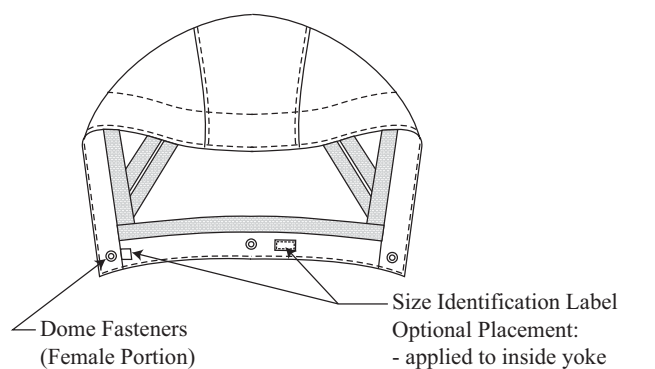
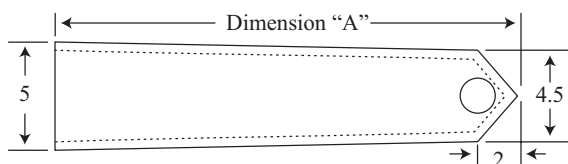
NOT TO SCALE

All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

Detachable Hood & Adjustment Strap Detail

Dwg. 4

Rear ViewFront ViewSide ViewInside Front ViewShoulder Strap Detail

Jacket Size (All Heights)	Dimension "A"
X-Small	14.25
Small	15.25
Medium	16.25
Large	17.25
X-Large	18.25
2X-Large	19.25
3X-Large	20.25
4X-Large	21.25
5X-Large	22.25

TABLE I
Shoulder Strap Length
(Finished)

NOT TO SCALE

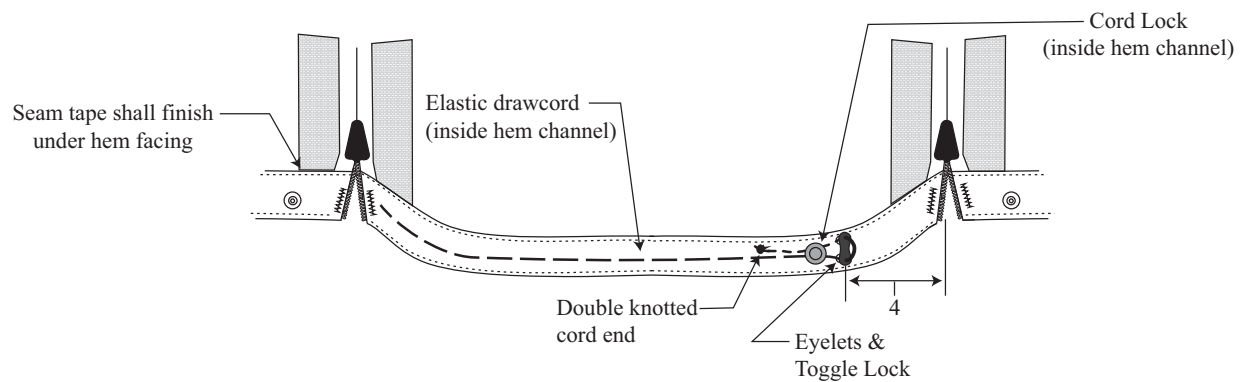
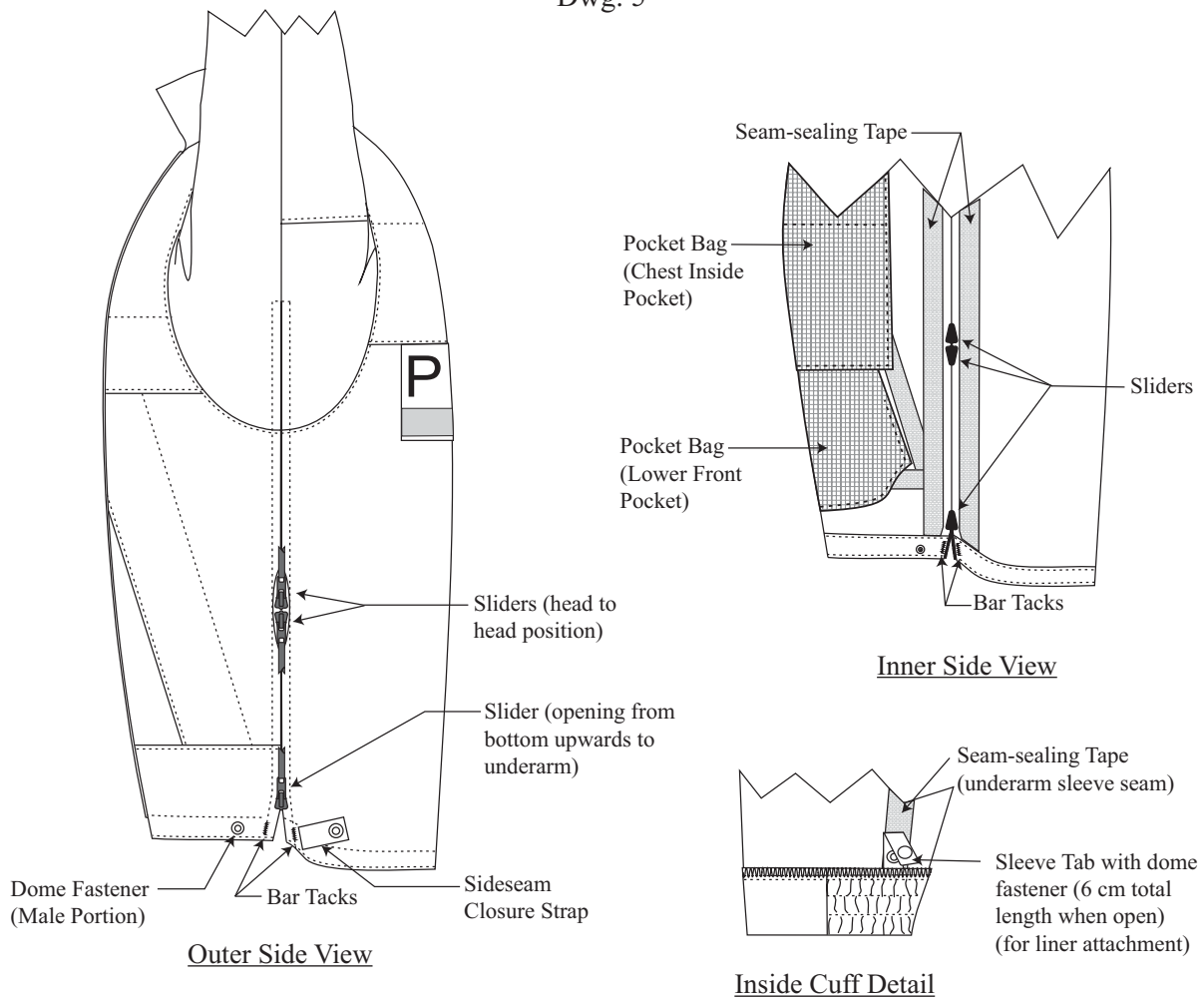
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

Jacket, Patrol, Unisex
Underarm, Inside Cuff
& Back Hem Channel Detail

G.S.1045-298

Dwg. 5



NOT TO SCALE

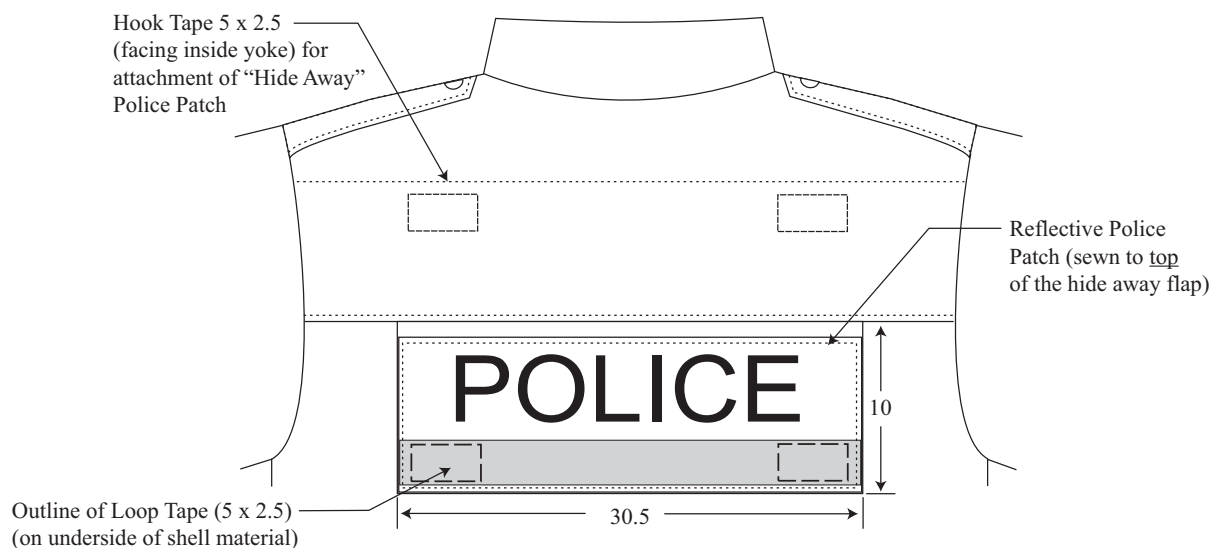
All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.

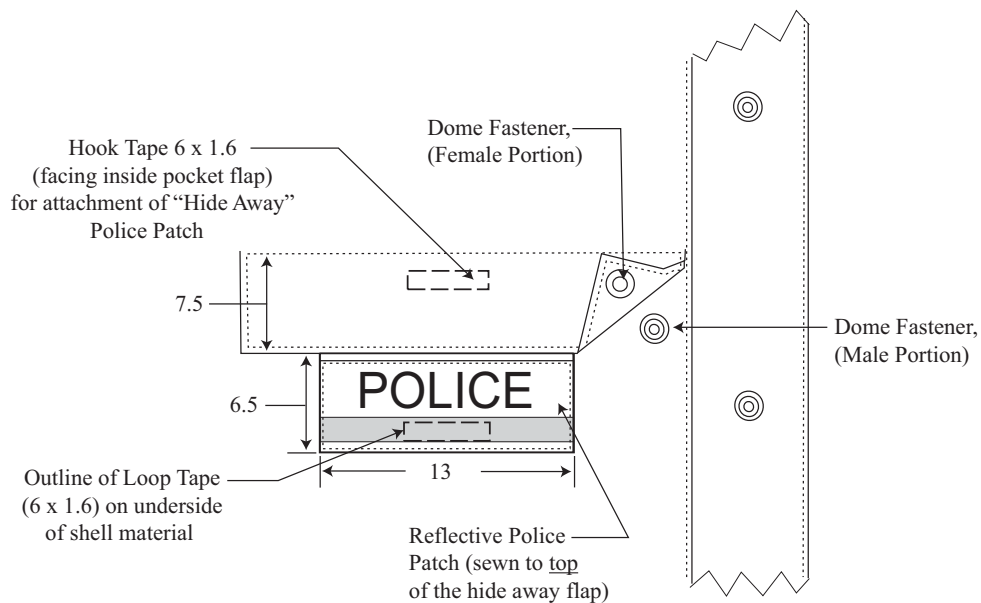
Jacket, Patrol, Unisex
 “Hide Away” Reflective Police Patch
 & Chest Pocket Detail

G.S.1045-298

Dwg. 6



Large Back Police Patch



Chest Pocket Detail
shown with corner folded up

NOT TO SCALE

All measurements are shown in centimeters.

± 0.5 cm tolerance acceptable unless otherwise indicated.



Royal Canadian Mounted Police
Gendarmerie royale du Canada

Doc. no: G.S. 1045-310

Date: 2016-04-27

Specification

Jacket, High Visibility

This document has 41 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

[illegible]

RCMP VIEWING SAMPLE

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

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 and 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

JACKET, HIGH VISIBILITY

1. Definitions

- 1.1 This specification shall govern the manufacture and inspection of Jacket, High Visibility. The specific item covered under this specification with stock number is as follows:
 - i. 3985 Jacket, High Visibility / Veste haute visibilité
 - ii. 3986-000 Jacket, High Visibility, Special / Veste haute visibilité, tailles spéciales
- 1.2 The specification, pattern, drawing, viewing sample or other information issued in connection therewith, may only be used for specific enquiries, solicitations, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for RCMP Jacket, High Visibility and/or purchase descriptions for RCMP Rain suit, High Visibility.
- 1.4 This specification has been translated into French from this original English language document.

2. Applicable Specifications

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the solicitation, unless otherwise specified.
- 2.2 CAN/CGSB 4.2 Textile Test Methods.
- 2.3 CSA-Z96-15 High-Visibility Safety Apparel.
- 2.4 CAN/CGSB 4.131-93, Thread, Polyester, Polyester or Cotton Covered.
- 2.5 CAN/CGSB 86.1-2003 Care Labeling of Textiles
- 2.6 FED-STD-191A, Federal Standard, Textile Test Methods.

- 2.7 ASTM, American Society for Testing and Materials, Method D3776/D3776M-09a (2013), D2097-03 (2010), D413-98, D3886-99 (2013), D4966-12, D1424-09 (2013), D5034-09 (2013), D5169-98 (2015), D5170-98 (2015), E808-01 (2009), E809-08 (2013), E1164-12 and F392/F392M-11.
- 2.8 ASTM, American Society for Testing and Materials, Method E308-01 Standard Practice for Computing the Colors of Objects by Using the CIE System.
- 2.9 AATCC-8-2013, 15-2013, 16.3-2014, 61-2013, 118-2013 and 135-2012, American Association of Textile Chemists and Colorists - Technical Manual.
- 2.10 ISO 105-B02:2014, ISO 13937-1:2000, International Standards Organization.
- 2.11 BS 3424-26: 1990, Method 29A, British Standards Institution.
- 2.12 RCMP Specification, G.S.1045-266, Badges Woven Item - Badge, Shoulder, Cloth, Police.

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 pattern and viewing sample.
- 3.2 **Design** - The Jacket, High Visibility shall be a loose fitting, waist length jacket designed to be worn in conjunction with a removable fleece jacket. The shell is constructed from a 3-layer material with a WMVP (waterproof moisture vapour permeable) membrane. The 3-layer fabric construction does not require a lining when made up into a garment. The jacket shall be waterproof with all seams permanently seam sealed unless otherwise stated. This jacket has been designed to meet CSA-Z96-15 requirements for a Class 2, Level 2 garment. The lettering “RCMP”, “GRC”, and “Police” shall be retro reflective on the front and back of the garment.

4. **Detail Requirements**

4.1 **Components**

- 4.1.1 **Shell Material I** - The shell material I shall be plain weave 100% nylon, Type 6.6. The color shall be dark navy blue, meeting the approved color swatch, with a durable water repellent finish. An appropriate heat-set process shall be applied to the shell material in order to be prepared for the lamination of the waterproof moisture vapour permeable membrane specified in Para. 4.1.3.1.
- 4.1.2 **Shell Material II** - The shell material II shall be plain weave 100% polyester. The color shall be fluorescent yellow-green, meeting CSA-Z96-15, with a durable water repellent (DWR) finish. The laminated portion of the contrast shall have an appropriate heat-set process applied to it, in order for it to be prepared for the lamination of the waterproof moisture vapour permeable membrane as specified in Para. 4.1.3.2.
- 4.1.3 **Shell Material, Laminated** - The laminated shell materials shall not show any visible signs of delamination or loss of film during the garments useful life (approximately 5 years). The fabric shall be capable of having its sewn seams, seam-sealed with an appropriate tape, in a waterproof, durable fashion. Materials not meeting these requirements will be cause for rejection. Delamination is defined as any irreparable separation of the bonded layers of the Laminated Shell Material(s).
- 4.1.3.1 **Shell Material I, Laminated** – The shell material I shall be laminated in a 3-layer format with a membrane, which after lamination provides a high level of water resistance/waterproofness and breathability. The outer layer shall consist of shell material I as specified in Para. 4.1.1, with the membrane as the middle layer, and a black, 100% nylon or polyester warp tricot knit fabric with a maximum weight of 55 g/m², as the inner layer. The layers shall be joined together by a suitable lamination process. The membrane when laminated to the shell material shall meet the test requirements outlined in Table I and Table II forming part of this specification.
- 4.1.3.2 **Shell Material II, Laminated** – The shell material II shall be laminated in a 3-layer format with a membrane, which after lamination provides a high level of water resistance/waterproofness and breathability. The outer layer shall consist of shell material II as specified in Para. 4.1.2, with the membrane as the middle layer, and a white, 100% nylon or polyester warp tricot knit fabric with a maximum weight of 55 g/m², as the inner layer. The layers shall be joined together by a suitable lamination process. The membrane when laminated to the shell material shall meet the test requirements outlined in Table I and Table IV forming part of this specification.

- 4.1.4 **Seam Sealing Tape** – The 3-layer composite fabric shall be seamed using a compatible nylon or polyester seam-sealing tape with the 3-layer shell fabric and sealed-seams meeting the requirements outlined in Table I forming part of this specification. The tape on the sealed seams shall not peel off and/or wear during the projected life span of the garment.
- 4.1.5 **Thread** - The thread shall be polyester wrap, polyester core, Tex 50, Class B of matching colour, meeting CAN/CGSB 4.131-93.
- 4.1.6 **Mesh Pocketing** - The pocketing shall be a polyester, warp knit mesh, black in colour or to match the shell material, meeting the requirements outlined in Table III. Tek-Knit “XPTAR004” is known to meet the requirement
- 4.1.7 **Retro reflective Markings and Lettering** - The retro reflective markings shall be exposed, wide angle, retroreflective lenses, silver material in the form of a heat transfer film, 5 cm wide. The lettering on the front and back will be Arial Black font dimensioned as per drawing #3. It shall meet all the retro reflective performance requirements outlined in Section 6, meeting Table 5 in the CSA-Z96-15 High-Visibility Safety Apparel standard. All retro reflective markings and lettering shall meet a minimum coefficient of retro reflection, R_A , that are determined in accordance with the procedures defined in E808-01 (2009) and E809-08 (2013). 3M Scotchlite™ 8725N silver material in the form of a heat transfer film is known to meet these requirements.
- 4.1.8 **Shoulder Badges** - The RCMP stock item number 2135-108, Badge, Shoulder, Police shall be purchased from the RCMP.

4.1.9 **Slide Fasteners - Lengths - Measurements in Inches**

Height Group	Sizes	Front	Inside Front	Side Seam	Sleeve Pocket	Chest Pocket	Inside Pocket
X Short	XX Small	19½"	13½"	15"	7"	6½"	7"
	X Small	20½"	14½"	15"	7"	6½"	7"
	Small	21"	15"	15"	7"	6½"	7"
	Medium	22"	15½"	16"	7"	6½"	7"
	Large	23"	16½"	16"	7"	6½"	7"
	X Large	23½"	17½"	17"	7"	6½"	7"
	2X Large	24½"	18"	17"	7"	6½"	7"
	3X Large	25"	19"	17"	7"	6½"	7"
	4X Large	26"	20"	18"	7"	6½"	7"
	5X Large	27"	20½"	18"	7"	6½"	7"
Short	XX Small	21½"	15½"	17"	7"	7"	7"
	X Small	22½"	16"	17"	7"	7"	7"
	Small	23"	17"	17"	7"	7"	7"
	Medium	24"	18"	18"	7"	7"	7"
	Large	25"	18½"	18"	7"	7"	7"
	X Large	25½"	19½"	19"	7"	7"	7"
	2X Large	26½"	20"	19"	7"	7"	7"
	3X Large	27"	21"	19"	7"	7"	7"
	4X Large	28"	22"	20"	7"	7"	7"
	5X Large	29"	22½"	20"	7"	7"	7"
Regular	XX Small	23½"	17½"	19"	8"	7½"	7"
	X Small	24½"	18"	19"	8"	7½"	7"
	Small	25"	19"	19"	8"	7½"	7"
	Medium	26"	20"	20"	8"	7½"	7"
	Large	27"	20½"	20"	8"	7½"	7"
	X Large	27½"	21½"	21"	8"	7½"	7"
	2X Large	28½"	22"	21"	8"	7½"	7"
	3X Large	29"	23"	21"	8"	7½"	7"
	4X Large	30"	24"	22"	8"	7½"	7"
	5X Large	31"	24½"	22"	8"	7½"	7"
Tall	XX Small	25½"	19½"	21"	8"	8"	7"
	X Small	26½"	20"	21"	8"	8"	7"
	Small	27"	21"	21"	8"	8"	7"
	Medium	28"	22"	22"	8"	8"	7"
	Large	29"	22½"	22"	8"	8"	7"
	X Large	29½"	23½"	23"	8"	8"	7"
	2X Large	30½"	24"	23"	8"	8"	7"
	3X Large	31"	25"	23"	8"	8"	7"
	4X Large	32"	25½"	24"	8"	8"	7"
	5X Large	33"	26"	24"	8"	8"	7"
X Tall	XX Small	27½"	21½"	23"	8"	8"	7"
	X Small	28½"	22"	23"	8"	8"	7"
	Small	29"	23"	23"	8"	8"	7"
	Medium	30"	24"	24"	8"	8"	7"
	Large	31"	24½"	24"	8"	8"	7"
	X Large	31½"	25½"	25"	8"	8"	7"
	2X Large	32½"	26"	25"	8"	8"	7"
	3X Large	33"	27"	25"	8"	8"	7"
	4X Large	34"	27½"	26"	8"	8"	7"
	5X Large	34½"	28½"	26"	8"	8"	7"
XX Tall	XX Small	29½"	23½"	25"	8"	8"	7"
	X Small	30½"	24"	25"	8"	8"	7"
	Small	31"	25"	25"	8"	8"	7"
	Medium	32"	25½"	26"	8"	8"	7"
	Large	33"	26½"	26"	8"	8"	7"
	X Large	33½"	27"	27"	8"	8"	7"
	2X Large	34"	28"	27"	8"	8"	7"
	3X Large	35"	29"	27"	8"	8"	7"
	4X Large	36"	29½"	28"	8"	8"	7"
	5X Large	36½"	30½"	28"	8"	8"	7"

4.1.9.1 **Slide Fastener - Front** - Shall be an open-end separator, black in colour, injection molded, DA automatic slider, Vislon® YKK 26500 VSO 56 9/16 (only).

- 4.1.9.2 **Slide Fastener - Right Inside Front** - (To be used for the attachment of a removable fleece jacket) - Shall consist of ½ (half) of an open-end slide fastener with the retaining box and slider; it shall be injection molded, with a DA automatic slider, black in colour, Vislon® YKK 26590 VSO 56 9/16 (only).
- 4.1.9.3 **Slide Fastener - Left Inside Front** - (To be used for the attachment of a removable fleece jacket) Shall consist of ½ (half) of an open-end slide fastener with the insert pin and shall be injection molded, black in colour, Vislon® YKK 26590 VSO 56 9/16 (Left Hand Pin Insertion) (only).
- 4.1.9.4 **Slide Fastener - Upper Sleeve Pocket** - Shall be a closed end coil type slide fastener with a DF non-lock slider, black in colour, YKK 12824 CIFC 51 DFW1 E 5/8 (only).
- 4.1.9.5 **Slide Fastener - Chest Pockets** - Shall be a closed end coil type slide fastener with a DF non-lock slider, black in colour, with long pull tabs, YKK 12430 CIFC 51 DFL1 E 5/8 (only).
- 4.1.9.6 **Slide Fastener - Side Seam** - Shall be water repellent, black in colour, with the tape treated with a strong water repellent finish and a coated back of polyurethane. PU coated side as the front with the sliders on. It shall be closed-ended with double sliders arranged in a head-to-head relation, Aqua Guard YKK 37338 CNT4MC 56/6/6 DA8BLH E/DA8BLH E/DA8LH E 5/8*B-B*H-H*TS-BTM*REV* (only).
- 4.1.9.7 **Slide Fastener - Inside Pockets** - The inside pocket slide fasteners shall be black in colour, woven-in style, DA automatic slider, YKK 20054 CFC 456 DA E 9/16 *E-BTM-2* (only).
- 4.1.10 **Hook and Loop Tape** - The 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 with initial peel strength of not less than 1 P.I.W. when tested to ASTM D5169-98 (2015), standard test method for shear strength [dynamic method] of hook and loop touch fasteners and ASTM D5170-98 (2015), standard test method for peel strength ["T" method] of hook and loop touch fasteners."
- 4.1.11 **Elastic Drawcord** - The drawcord shall be round braided polyester elastic, black in colour, 2.4 mm, with maximum elongation of 135% and full recovery. Cansew style #EBR C-38 is known to meet the requirement.

4.1.12 **Cord Locks**

4.1.12.1 **Cord Locks** - The cord locks shall be low profile cord lock cylinder, spring loaded in acetyl composition, black in colour. It shall come in two sizes. The cord lock for the hem channel shall be shaped with a maximum diameter of 13 mm and a maximum depth of 11.2 mm. Texfast style #S217B is known to meet the requirement. The cord lock for the hood shall be shaped with a maximum diameter of 15.5 mm and a maximum depth of 12.5 mm. Texfast style #S217A is known to meet the requirement.

4.1.12.2 **Toggle Lock** - The lock shall be oval shaped with a maximum length of 30 mm and a maximum width of 9 mm, with two 4 mm holes, acetyl composition, and black in colour. It may be of sew on or clamp-on version.

4.1.13 **Eyelets** - The eyelets shall be black in colour with a 5-6 mm diameter hole, brass or aluminum.

4.1.14 **Dome Fastener** - The dome fastener shall be a standard type 24 ligne fastener. All metal parts to be brass with a 15 mm matte black, powder coated cap. Universal SW61 (only).

4.1.15 **Elastic** - The elastic shall be heavy duty nylon or polyester, black in colour, with maximum elongation of 130% and full recovery. It shall come in two widths, 2.5 cm and 4 cm. The elastic measuring 2.5 cm shall be used in a double layer for the side seam closure strap. The elastic measuring 4 cm shall be used for the sleeve cuff.

4.1.16 **Grosgrain Ribbon** - Shall be nylon grosgrain ribbon, black in colour and come in three widths, 6 mm, 1 cm and 2.5 cm.

4.1.17 **Webbing, Microphone Strap** - The webbing shall be a durable nylon webbing, luggage quality, black in colour measuring 2.54 cm (1") wide and 0.04" ± 0.01" thick. It shall have a minimum tensile strength of 1000 lbs. as per Federal Standard 191-5206 test method #4108 and be equal in appearance to the viewing sample. Tape Craft #N0015-1"-YD001-352 is known to meet the requirements.

4.2 **Size and Dimensions** - Jacket, High Visibility to this specification 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 and Seam Sealing** - All stitching shall be lockstitch. There shall be not less than three or more than four stitches per centimetre. The beginning and ending of all stitching shall be securely backstitch tacked, unless secured by other stitching. All seams and points where stitching penetrates the shell materials shall be permanently sealed on the inside with the appropriate seam-sealing tape as per Para. 4.1.3. Care shall be taken to ensure that the tape cross-over points where seams join are doubly covered and bonded securely so as to ensure water-resistance. Any sealed seams showing any form of delamination or any non-bonded or peeling seams shall be a cause for rejection.

4.3.2 **Body**

4.3.2.1 **Back** - The upper body shall be made from shell material II as specified in Para. 4.1.3.2 and the lower body shall be made from shell material I as specified in Para. 4.1.3.1. The back shall have a retro reflective pattern and retro reflective lettering meeting CSA-Z96-15 requirements as outlined in Para. 4.3.9 and 4.3.9.1. The back when finished shall conform in every respect to the patterns and drawings.

4.3.2.2 **Back Hem Channel** - The back hem facing shaped and dimensioned as per the pattern shall be sewn face side out, to the bottom of the jacket back to create a hem channel for the elastic drawcord. The hem channel shall have two eyelets as per Para. 4.1.13, measuring 4 cm from the left side seam as identified in drawing # 6. An elastic drawcord as specified in Para. 4.1.11 shall be securely attached into the right side seam and threaded through the hem channel. It shall continue through the smaller cord lock as specified in Para. 4.1.12.1, and through the eyelet outside the hem channel. It shall be threaded through the toggle lock as specified in Para. 4.1.12.2 and back through a second eyelet. It shall continue back through the cord lock where the drawcord shall be knotted. When assembled completely, the cord lock shall be hidden in the channel with only the looped end of the elastic drawcord and the toggle lock showing as per drawings # 6 and 8.

4.3.2.3 **Front** - The jacket shall be equipped with a center front slide fastener as specified in Para. 4.1.9.1, lengths as specified in Para 4.1.9, and the bottom ends of the slide fasteners shall be bar tacked as per drawing # 6. The front shall have two front storm flaps with dome fasteners for closure. The front shall have two chest pockets with slide fasteners and flaps with dome fasteners. The front shall have a retro reflective pattern and retro reflective lettering meeting CSA-Z96-15 requirements as outlined in Para. 4.3.9 and 4.3.9.1. On the right-hand side, there shall be an 8.5

cm x 2.5 cm piece of loop tape as specified in Para. 4.1.10 for the name tag. The left and right fronts shall be equipped with webbing as specified in Para. 4.1.17, measuring 2.5 cm x 5 cm for the microphone loop. All components of the front shall be constructed as per the patterns and drawings.

- 4.3.2.4 **Chest Pockets** - The jacket shall have two vertical chest pockets with slide fasteners as specified in Para. 4.1.9.5 and lengths as specified in Para. 4.1.9. Ribbon pulls as specified in Para. 4.3.12 shall be applied to the sliders. The slider shall be in an upright position when the pocket is closed. Each chest pocket shall have flaps which shall be dimensioned in accordance with the patterns. The dome fastener as specified in Para. 4.1.14 shall be applied to the flap for closure. There shall be two inside pockets as shown in drawing # 6 constructed out of mesh material as specified in Para. 4.1.6 secured with a slide fastener as specified in Para. 4.1.9.7 and lengths as specified in Para. 4.1.9. There shall be two labels sewn through the mesh inner pocket bag with the Identification label and Marking and Cleaning Instructions as shown in drawing # 6.
- 4.3.2.5 **Under Fly Front & Front Storm Flaps** - The under fly front shall be fitted with two injection molded slide fasteners, length as specified in Para. 4.1.9. One is for the front closure and one is for the attachment of the removable fleece. The jacket front slide fastener, as specified in Para. 4.1.9.1, shall be inserted in a way to have the slider and retaining box on the left front and the insert pin attached on the right front. A ribbon pull as specified in Para. 4.3.12 shall be applied to the slider. The left front storm flap shall have five dome fasteners (female portion) as specified in Para. 4.1.14, which align with the male portions attached to the right front storm flap as per drawing # 6. There shall be ½ (half) of a slide fastener attached to the right facing and ½ (half) of a slide fastener attached to the left facing to be used for the attachment of a removable fleece jacket. The ½ (half) attached to the front right inside facing as specified in Para. 4.1.9.2 shall consist of the retaining box and slider which shall begin 2 cm below the collar seam for all sizes. The ½ (half) attached to the left inside front, as specified in Para. 4.1.9.3, shall consist of the insert pin and begin 2 cm below the collar seam for all sizes, as shown in drawing # 6. The bottom ends of all the slide fasteners shall be bar tacked as per drawing # 6. An external pen pocket measuring 2 cm after folding in half shall be constructed from a single layer of shell material II. It shall be sewn to the left chest only directly under the top storm flap between the front slide fastener and storm flap. The pen pocket shall be dimensioned and positioned as per the patterns and drawings.
- 4.3.3 **Side Seams** - Both side seams from sleeve underarm to hem shall be equipped with a water-resistant slide fastener as specified in Para. 4.1.9.6, and lengths as specified

in Para. 4.1.9 and the bottom ends of the slide fasteners shall be bar tacked as per drawings # 6. The slide fastener, when applied, shall be covered by the shell material. There shall be 3 sliders, the two closest to the underarm should be in a head to head position and the third shall be opening from the bottom upwards as shown in drawing # 8. All sliders shall be equipped with ribbon pulls as specified in Para. 4.3.12. The seam tape, when applied, shall extend into the front and back hem facing so that no tape ends are visible as shown in drawing # 8. The side seam hem shall have an elastic closure strap as specified in Para. 4.3.13, measuring 2.5 cm wide constructed as per drawing # 8.

- 4.3.4 **Collar** - The collar, made of shell material II as specified in Para. 4.1.3.2, shall be designed as per the patterns. There shall be three dome fasteners (male portion) as specified in Para. 4.1.14 for the attachment of the detachable hood.
- 4.3.5 **Detachable Hood** - The hood shall be constructed from shell material II as specified in Para. 4.1.3.2 with all sewn seams, seam-sealed. It shall be constructed in a way to have double adjustment for height and width, with an elastic drawcord as specified in Para. 4.1.11 and large size cord locks as specified in Para. 4.1.12.2. The hood shall be secured to the collar with 3 (three) dome fasteners as specified in Para. 4.1.14 with the female portion applied to the hood and the corresponding male portion to the collar. Eyelets as per Para. 4.1.13 shall be applied to each side of the hood side fronts for the insertion of the elastic drawcord. The elastic drawcord shall be threaded through the inside channel continuing through the eyelet with cord locks applied as per drawing # 7. A label identifying the corresponding hood size shall be sewn to the bottom hood facing mid back position or centered on the facing as shown in drawing # 7.
- 4.3.6 **Sleeve & Sleeve Cuffs** - The jacket shall have a three piece sleeve with an upper sleeve pocket. The sleeve shall be made of shell material II as specified in Para. 4.1.3.2. All sleeve seams with exception of the underarm seam shall be top stitched using a 2 mm gauge. A dome fastener shall be applied to a piece of 2.5 cm wide grosgrain ribbon which is doubled and sewn securely to the cuff/sleeve seam for the attachment of the liner as shown in drawing # 8. The cuff shall be made from shell material I as specified in Para. 4.1.3.1. The sleeves shall have a 9 cm adjustment strap with a 4.5 cm x 2.5 cm piece of hook tape as specified in Para. 4.1.10 for adjustability. The cuff shall be 4 cm wide with a 12 cm x 2.5 cm piece loop tape to secure the adjustment strap. The cuff shall be partially elasticized using 4 cm wide elastic as specified in Para. 4.1.15. The elasticized area of the cuff shall have two rows of top stitching to anchor the elastic. The sleeves and cuffs shall be shaped and dimensioned as per the patterns and viewing sample.

- 4.3.7 **Shoulder Straps** - Shoulder straps, shaped and dimensioned in accordance with the patterns and drawing # 7, shall be made from two layers of shell material II as specified in Para. 4.1.3.2. They shall be sewn into the sleeve-head and positioned as per the pattern and viewing sample. The shoulder strap shall be secured to the jacket shoulder with the dome fastener specified in Para. 4.1.14.
- 4.3.8 **Upper Sleeve Pocket** - Both sleeves shall have an upper sleeve pocket constructed from shell material II with a slide fastener as specified in Para. 4.1.9.4. When in a closed position, the slider shall be facing toward the shoulder as shown in drawing # 2. Ribbon pulls as specified in Para. 4.3.12 shall be applied to the sliders. There shall be two rows of topstitching around the slide fastener, using 2 mm gauge and 6 mm gauge. The sleeve pocket shall be sewn to the sleeve, top-stitched using a 2 mm gauge and seam sealed appropriately to ensure waterproofness. The upper sleeve pocket shall be constructed in accordance with the patterns and drawings.
- 4.3.9 **Retro reflective Pattern** - The retro reflective material as specified in Para. 4.1.7 shall be heat transferred to the shell material II and positioned as per drawing # 2. The pattern template for the retro reflective markings shall be used but it does not show the break for the letter placement on the back. Refer to drawing # 5 for letter placement. The break shall be 10 cm high, measuring 5 cm vertically on both sides of center keeping the “X” symmetrical. The word “POLICE” shall be centered in the “X” and the words “RCMP” and “GRC” shall be above it as per drawing # 4. The horizontal band extending from side to side shall align to meet with the bottom of the “X”. The front body shall have retro reflective material from the shoulder seam extending down the body to meet the horizontal band that extends from side to side as per pattern. Each sleeve shall have a continuous retro reflective band circling the sleeve as per pattern. All retro reflective material shall be permanently attached to the shell material by means of heat sealing. No stitching shall be employed in attaching the retro reflective material, and the heat-sealing shall endure for the life of the garment. There shall be no loose or unbonded edges, or loss of film. Retro reflective material shall not cover other retro reflective material in order to provide the best bond between the retro reflective material and the shell material.
- 4.3.9.1 **Retro reflective Lettering** - The font shall be Arial Black in retro reflective material as specified in Para. 4.1.7. On the back, the word “POLICE” shall be centered within the 10 cm high break in the “X” and the words “RCMP” and “GRC” shall be above “POLICE”, dimensioned and positioned as per drawing # 4 and # 5. The lettering “RCMP” shall be left justified in relation to “POLICE” and the “GRC” shall be right justified in relation to “POLICE”. On the front, 1 cm below

the name tag shall be “RCMP”, “GRC” and “POLICE” lettering, dimensioned and positioned as per drawing # 4. The lettering “RCMP” shall be left justified in relation to “POLICE” and the lettering “GRC” shall be right justified in relation to “POLICE”. The front lettering shall be in line with the left side of the name tag.

- 4.3.10 **Shoulder Badges** - The RCMP shoulder badges specified in Para. 4.1.8 shall be sewn through the upper sleeve pocket only (not through the sleeve). The badge is to be centered on the sleeve-head 2.5 cm below the sleeve-head seam and attached with one row of stitching, as per the viewing sample.
- 4.3.11 **Coat Hanger** - A 6 cm long coat hanger, constructed from 6 mm wide grosgrain ribbon as specified in Para. 4.1.16 shall be centered at the neck in accordance with the viewing sample.
- 4.3.12 **Slide Fastener Ribbon Pulls** – All ribbon pulls shall be constructed with grosgrain ribbon 1 cm wide, as specified in Para. 4.1.16. The ribbon shall applied to the hole of the slide fastener pull in a way that allows the ribbon pulls to be removed easily without damage and reapplied. The ribbon pull should be 5 cm ± 0.5 cm in length when finished and attached to the slide fastener.
- 4.3.13 **Side Seam Closure Strap** - There shall be a side seam closure strap measuring 9 cm ± 0.5 cm when finished, at the side seam hem. It shall be constructed from 2.5 cm wide elastic as specified in Para. 4.1.15 doubled and shall be sewn to the lower back side seam flipping toward the front, equipped with a female dome fastener for closure. The corresponding male dome fastener shall be applied to the jacket front at the hem.
- 4.3.14 **Identification Label** - Each jacket shall have a durable blank label 7.5 cm x 2 cm applied separately below the marking and cleaning label used for the inscription of the wearers’ name.
- 4.3.15 **Marking & Cleaning Instructions Label** - Each jacket shall have a durable label positioned and sewn to the bottom of the inside pocket bag as shown in drawing # 6. The label information shall be as outlined below in a text no less than a size 8 font. The text shall be of permanent inks of a contrasting colour and shall withstand at least 50 washes showing no apparent change in appearance. The label shall be completed in accordance with the following information in English and French.
1. Item name in English as written in para. 1.1.
 2. Item name in French as written in para. 1.1.
 3. RCMP stock number - reference contract documents. (Ex. 3985 000)

4. Size and height group of the article, combining the size designation referenced in the English and French contract documents. (Ex. L/R - G/R)
5. Date of manufacture, in numeric format year/month (Ex. 2001/11)
6. Your manufacturer identification (Company name or number).
7. Print information as shown below.
8. Print information as shown below.
9. Print information as shown below.
10. Print information as shown below.
11. Print information as shown below.
12. Print information as shown below.
13. Print information as shown below.

1		
2		
3		
4		
5		
6		
7	Machine wash - warm (40°C)	Laver à la machine – à l’eau tiède (40°C)
8	Do Not use fabric softener or chlorine bleach	Ne pas utiliser d’agent adoucissant ni d’agent de blanchiment
9	Tumble dry- medium (Do Not use dryer sheets)	Séchage par culbutage – à température moyenne (Ne pas utiliser d’assouplissant en feuilles)
10	Steam iron - low	Repassage à vapeur - à température basse
11	Dry clean - If professionally dry cleaned request clear distilled solvent rinse; request spray repellent.	Nettoyer à sec - demander un rinçage avec un solvant distillé clair et un traitement à l’aide d’un produit hydrofuge à vaporiser
12	Further care instructions: See Ordering Guide.	Instructions d’entretien supplémentaires: Voir le guide de commande.
13	CSA-Z96-15 Class 2, Level 2 Fluorescent Yellow-Green	Norme Z96-09 de la CAN/CSA Classe 2, Niveau 2 Jaune-vert fluorescent

Note: The manufacturer’s identification shall not appear anywhere on the garment except on the garment label as indicated.

- 4.3.16 **Instruction Sheet** - Each completed jacket shall have an instruction sheet folded and inserted into the inside chest pocket bag, with the information included in Appendix “B” English and French, forming a part of this specification.

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 RCMP, Uniform and 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 RCMP, Uniform and Equipment Program that conformity to this specification of manufacturing processes is assured. The contractor must use an independent, North American, ISO 9001 certified and ISO 17025 "Textile" certified testing facilities. Note: CTT Group Inc., Quebec, is known to meet this requirement.
- 5.2 The RCMP, Uniform and Equipment Program reserve 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. **Scale of Measurement Definitions and Location References**

(Refer to the Scale of Measurements and Drawing No. 1)

- 6.1 **Chest Circumference (total circumference)** - When placed flat, the chest circumference shall be the distance across the jacket, measured at the lowest point of the armholes. The result shall be doubled to measure total circumference. (A).
- 6.2 **Bottom Circumference (total circumference)** - When placed flat, the bottom shall be measured across the jacket bottom. The result shall be doubled to measure total circumference. (B).
- 6.3 **Front Length** - The length shall be the distance measured from the top of the collar to the hem at front. (C).
- 6.4 **Side Length** - The length shall be the distance measured from the base of the armhole at the side to the hem. (D).
- 6.5 **Full Shoulder Width** - The distance measured at the shoulder seam from neckline to armhole. (E).
- 6.6 **Sleeve Length Overarm** - The overarm sleeve length shall be the distance from the armhole at the shoulder seam to the bottom edge of the sleeve cuff. (F).
- 6.7 **Sleeve Length Underarm** - The underarm sleeve length shall be the distance under sleeve from the armhole to the bottom edge of the sleeve cuff. (G).
- 6.8 **Sleeve Cuff Circumference (Relaxed)** - The sleeve cuff shall be measured at the bottom edge of the sleeve. The result shall be doubled to measure total circumference. (H).
- 6.9 **Elbow Circumference** - The elbow shall be measured across the width of the sleeve in line with the seam of the sleeve patch. The result shall be doubled to measure total circumference. (J).
- 6.10 **Back Length** - The length shall be the distance measured from the bottom of the collar at the back to the hem. (K).
- 6.11 **Back Width** - When placed flat, the distance measured across the back from shoulder point to shoulder point. (L).
- 6.12 **Collar Length** – The collar length shall be measured along the seam from slide fastener to slide fastener. (M).

SCALE OF MEASUREMENTS - Jacket, High Visibility															
SIZE DESIGNATION		BODY MEASUREMENTS		GARMENT MEASUREMENTS											
Height Group	Size	Chest		Chest Circumference	Bottom Circumference	Front Length (top of collar to hem)	Side Seam Length (underarm to hem)	Full Shoulder Width (Shoulder seam from neckline to armhole)	Sleeve Length		Cuff Circumference	Elbow Circumference	Back Length (Bottom of collar at back to hem)	Back Width	Collar Length (zipper to zipper)
		Inches	cm						Overarm (Shoulder seam to cuff)	Underarm (Underarm seam to cuff)					
X Short	XXS	31" - 33"	79 - 84	108	98	55	25	14	52.75	48.5	24	43	61	40.5	47
	XS	34" - 36"	86 - 91	115.5	105.5	57	26	15	54.5	49.75	25	46	63	43.25	49
	S	37" - 39"	94 - 99	123	113	59	27	16	56.25	51	26	49	65	46	51
	M	40" - 42"	102 - 107	130.5	120.5	61	28	17	58	52.25	27	52	67	48.75	53
	L	43" - 45"	109 - 114	138	128	63	29	18	59.75	53.5	28	55	69	51.5	55
	XL	46" - 48"	117 - 122	145.5	135.5	65	30	19	61.5	54.75	29	58	71	54.25	57
	2XL	49" - 51"	124 - 129	153	143	67	31	20	63.25	56	30	61	73	57	59
	3XL	52" - 54"	132 - 137	160.5	150.5	69	32	21	65	57.25	31	64	75	59.75	61
	4XL	55" - 57"	140 - 145	168	158	71	33	22	66.75	58.5	32	67	77	62.5	63
	5XL	58" - 60"	147 - 152	175.5	165.5	73	34	23	68.5	59.75	33	70	79	65.25	65
Short	XXS	31" - 33"	79 - 84	108	98	60	30	14	56.75	52.5	24	43	66	40.5	47
	XS	34" - 36"	86 - 91	115.5	105.5	62	31	15	58.5	53.75	25	46	68	43.25	49
	S	37" - 39"	94 - 99	123	113	64	32	16	60.25	55	26	49	70	46	51
	M	40" - 42"	102 - 107	130.5	120.5	66	33	17	62	56.25	27	52	72	48.75	53
	L	43" - 45"	109 - 114	138	128	68	34	18	63.75	57.5	28	55	74	51.5	55
	XL	46" - 48"	117 - 122	145.5	135.5	70	35	19	65.5	58.75	29	58	76	54.25	57
	2XL	49" - 51"	124 - 129	153	143	72	36	20	67.25	60	30	61	78	57	59
	3XL	52" - 54"	132 - 137	160.5	150.5	74	37	21	69	61.25	31	64	80	59.75	61
	4XL	55" - 57"	140 - 145	168	158	76	38	22	70.75	62.5	32	67	82	62.5	63
	5XL	58" - 60"	147 - 152	175.5	165.5	78	39	23	72.5	63.75	33	70	84	65.25	65
TOLERANCES±				3	3	2	1.5	1	1.5	1.5	1	2	2	1	1
MEASUREMENT LOCATION				A	B	C	D	E	F	G	H	J	K	L	M

NOTE: All dimensions are in centimeters unless otherwise indicated.

SCALE OF MEASUREMENTS - Jacket, High Visibility															
SIZE DESIGNATION		BODY MEASUREMENTS		GARMENT MEASUREMENTS											
Height Group	Size	Chest		Chest Circumference	Bottom Circumference	Front Length (top of collar to hem)	Side Seam Length (underarm to hem)	Full Shoulder Width (Shoulder seam from neckline to armhole)	Sleeve Length		Cuff Circumference	Elbow Circumference	Back Length (Bottom of collar at back to hem)	Back Width	Collar Length (zipper to zipper)
		Inches	cm						Overarm (Shoulder seam to cuff)	Underarm (Underarm seam to cuff)					
Regular	XXS	31" - 33"	79 - 84	108	98	65	35	14	60.75	56.5	24	43	71	40.5	47
	XS	34" - 36"	86 - 91	115.5	105.5	67	36	15	62.5	57.75	25	46	73	43.25	49
	S	37" - 39"	94 - 99	123	113	69	37	16	64.25	59	26	49	75	46	51
	M	40" - 42"	102 - 107	130.5	120.5	71	38	17	66	60.25	27	52	77	48.75	53
	L	43" - 45"	109 - 114	138	128	73	39	18	67.75	61.5	28	55	79	51.5	55
	XL	46" - 48"	117 - 122	145.5	135.5	75	40	19	69.5	62.75	29	58	81	54.25	57
	2XL	49" - 51"	124 - 129	153	143	77	41	20	71.25	64	30	61	83	57	59
	3XL	52" - 54"	132 - 137	160.5	150.5	79	42	21	73	65.25	31	64	85	59.75	61
	4XL	55" - 57"	140 - 145	168	158	81	43	22	74.75	66.5	32	67	87	62.5	63
	5XL	58" - 60"	147 - 152	175.5	165.5	83	44	23	76.5	67.75	33	70	89	65.25	65
Tall	XXS	31" - 33"	79 - 84	108	98	70	40	14	64.75	60.5	24	43	76	40.5	47
	XS	34" - 36"	86 - 91	115.5	105.5	72	41	15	66.5	61.75	25	46	78	43.25	49
	S	37" - 39"	94 - 99	123	113	74	42	16	68.25	63	26	49	80	46	51
	M	40" - 42"	102 - 107	130.5	120.5	76	43	17	70	64.25	27	52	82	48.75	53
	L	43" - 45"	109 - 114	138	128	78	44	18	71.75	65.5	28	55	84	51.5	55
	XL	46" - 48"	117 - 122	145.5	135.5	80	45	19	73.5	66.75	29	58	86	54.25	57
	2XL	49" - 51"	124 - 129	153	143	82	46	20	75.25	68	30	61	88	57	59
	3XL	52" - 54"	132 - 137	160.5	150.5	84	47	21	77	69.25	31	64	90	59.75	61
	4XL	55" - 57"	140 - 145	168	158	86	48	22	78.75	70.5	32	67	92	62.5	63
	5XL	58" - 60"	147 - 152	175.5	165.5	88	49	23	80.5	71.75	33	70	94	65.25	65
TOLERANCES±				3	3	2	1.5	1	1.5	1.5	1	2	2	1	1
MEASUREMENT LOCATION				A	B	C	D	E	F	G	H	J	K	L	M

NOTE: All dimensions are in centimeters unless otherwise indicated.

NOTE: All dimensions are in centimeters unless otherwise indicated.

SCALE OF MEASUREMENTS - Jacket, High Visibility															
SIZE DESIGNATION		BODY MEASUREMENTS		GARMENT MEASUREMENTS											
Height Group	Size	Chest		Chest Circumference	Bottom Circumference	Front Length (top of collar to hem)	Side Seam Length (underarm to hem)	Full Shoulder Width (Shoulder seam from neckline to armhole)	Sleeve Length		Cuff Circumference	Elbow Circumference	Back Length (Bottom of collar at back to hem)	Back Width	Collar Length (zipper to zipper)
		Inches	cm						Overarm (Shoulder seam to cuff)	Underarm (Underarm seam to cuff)					
X Tall	XXS	31" - 33"	79 - 84	108	98	75	45	14	68.75	64.5	24	43	81	40.5	47
	XS	34" - 36"	86 - 91	115.5	105.5	77	46	15	70.5	65.75	25	46	83	43.25	49
	S	37" - 39"	94 - 99	123	113	79	47	16	72.25	67	26	49	85	46	51
	M	40" - 42"	102 - 107	130.5	120.5	81	48	17	74	68.25	27	52	87	48.75	53
	L	43" - 45"	109 - 114	138	128	83	49	18	75.75	69.5	28	55	89	51.5	55
	XL	46" - 48"	117 - 122	145.5	135.5	85	50	19	77.5	70.75	29	58	91	54.25	57
	2XL	49" - 51"	124 - 129	153	143	87	51	20	79.25	72	30	61	93	57	59
	3XL	52" - 54"	132 - 137	160.5	150.5	89	52	21	81	73.25	31	64	95	59.75	61
	4XL	55" - 57"	140 - 145	168	158	91	53	22	82.75	74.5	32	67	97	62.5	63
	5XL	58" - 60"	147 - 152	175.5	165.5	93	54	23	84.5	75.75	33	70	99	65.25	65
XX Tall	XXS	31" - 33"	79 - 84	108	98	80	50	14	72.75	68.5	24	43	86	40.5	47
	XS	34" - 36"	86 - 91	115.5	105.5	82	51	15	74.5	69.75	25	46	88	43.25	49
	S	37" - 39"	94 - 99	123	113	84	52	16	76.25	71	26	49	90	46	51
	M	40" - 42"	102 - 107	130.5	120.5	86	53	17	78	72.25	27	52	92	48.75	53
	L	43" - 45"	109 - 114	138	128	88	54	18	79.75	73.5	28	55	94	51.5	55
	XL	46" - 48"	117 - 122	145.5	135.5	90	55	19	81.5	74.75	29	58	96	54.25	57
	2XL	49" - 51"	124 - 129	153	143	92	56	20	83.25	76	30	61	98	57	59
	3XL	52" - 54"	132 - 137	160.5	150.5	94	57	21	85	77.25	31	64	100	59.75	61
	4XL	55" - 57"	140 - 145	168	158	96	58	22	86.75	78.5	32	67	102	62.5	63
	5XL	58" - 60"	147 - 152	175.5	165.5	98	59	23	88.5	79.75	33	70	104	65.25	65
TOLERANCES±				3	3	2	1.5	1	1.5	1.5	1	2	2	1	1
MEASUREMENT LOCATION				A	B	C	D	E	F	G	H	J	K	L	M

NOTE: All dimensions are in centimeters unless otherwise indicated.

TABLE I
Properties of Laminated Shell Material (with WMVP membrane & tricot backing)

	Test	Test Method	Duration	Min. Value Shell Material I	Min. Value Shell Material II
1	Resistance of Materials to Water Vapour Diffusion	CAN CGSB 4.2 Method 49-M99, Option 1 *See test procedure #1	- Initial - After 5 launderings - After ageing (70°C & 95% RH for 168 hrs)	13 mm max.	13 mm max.
2	Hydrostatic Resistance	CAN CGSB 4.2 Method 26.5 *See test procedure #2	- Initial - After 5 launderings	1240.2 kPa	689 kPa
3	Low Pressure Water Permeability	CAN CGSB 4.2 Method 26.3 * See test procedure #3	- Initial	No Leakage	No Leakage
		ASTM D2097-03 (2010) * See test procedure #4	- After Cold Flex Warp/ Fill	No Leakage	No Leakage
		AATCC 135-2012/Test procedure 6 * See test procedure #5	- After 100 hours of Continuous Wet Flex (Agitation)	No Leakage	No Leakage
4	High Pressure Water Permeability	BS 3424: Part 26: 1990 Method 29A * See test procedure #6	- Initial	No Leakage	No Leakage
		BS 3424: Part 26: 1990 Method 29A * See test procedure #7	- After Unleaded Gasoline	No Leakage	No Leakage
		BS 3424: Part 26: 1990 Method 29A * See test procedure #7	- After DEET Insect Repellent	No Leakage	No Leakage
		BS 3424: Part 26: 1990 Method 29A * See test procedure #8	- After Synthetic Perspiration	No Leakage	No Leakage
5	Abrasion Resistance	ASTM D3886-99 (2013) Procedure: use No. 0 Emery Polishing Paper * See test procedure #9	- 3200 Cycles	No failure	No failure
SEAMS					
6	Seam Tape Durability	CAN CGSB 4.2 Method 26.3 * See test procedure #10	- Initial	No Leakage	No Leakage
		CAN CGSB 4.2 Method 26.3 ANSI/AATCC 135 * See test procedure #11	- After 10 laundry cycles	No Leakage	No Leakage

TABLE I
Properties of Laminated Shell Material (with WMVP membrane & tricot backing)

	Test	Test Method	Duration	Min. Value Shell Material I	Min. Value Shell Material II
		CAN CGSB 4.2 Method 26.3 * See test procedure #12	- After 10 dry-clean cycles	No Leakage	No Leakage
7	Delamination	Visual	- During and after the above procedures in this table	No Delaminatio n	No Delaminatio n
8	Peel Strength N/23 mm	ASTM D413-98		8 N/23mm minimum	8 N/23mm minimum

TEST PROCEDURES FOR TABLE I

1. The knit side of the laminated cloth shall face the water. The tests shall be completed as outlined in CAN/CGSB 4.2 Method 49-99, Option #1. The samples shall be conditioned at $21^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($69.8^{\circ}\text{F} \pm 2^{\circ}\text{F}$) and relative humidity shall be $65 \pm 2\%$. The test specimen shall be placed approximately equidistant between the dry airflow and the water cell. Four specimens shall be tested per condition. The tests shall be completed initial, after 5 launderings according to ISO 6330-2012 Method 2B-E and after ageing according to ASTM F392/F392M-11.
2. The water pressure shall be applied to the knit side of the laminated cloth. A taffeta fabric restraint conforming to MIL-C-21852F-TYPE III-CLASS1 PART#WJAAGNA should be placed on top of the sample against the face side of the laminated cloth.
3. The knit side of the laminated cloth shall contact the water. The hydrostatic head shall be 13.78 kPa (2.0 psi) and shall be held for 3 minutes. Leakage is defined as the appearance of water any place within the 11.43 cm (4.5") diameter test area. The test may be performed using any device which tests the same specimen area at the equivalent pressure. In case of dispute, the apparatus described in FED-STD-191A Method 5516 shall be used.
4. Ten warp and ten fill specimens 8.26 cm x 11.43 cm (3.25" x 4.5") shall be selected from each sample unit. The 8.26 cm (3.25") dimension is the test direction. Specimens shall be flexed for 20,000 cycles as specified in ASTM D2097-03 (2010) and as follows: Mark the knit side of each specimen with two lines 4.32 cm (1.7") apart and perpendicular to the test direction. The area between the lines is the test area and shall be centered on the knit side of the specimen. Wrap the specimens around fully extended pistons with the knit side out. The test area lines shall meet evenly and shall line up with the edges of the pistons. Clamp in place making sure the clamps are not in the test area. Check specimen for smoothness and tautness (wrinkles cause improper flexing). The distance between the pistons shall be 4.32 cm (1.7") in the open position

and 1.27 cm (0.5") in the closed position as measured from the bottom of the upper piston and top of the lower piston. Place the test apparatus with mounted specimens in a test chamber at $-31.67^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($-25^{\circ}\text{F} \pm 2^{\circ}\text{F}$) for a one hour conditioning period and then flex in the test chamber at $-31.67^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($-25^{\circ}\text{F} \pm 2^{\circ}\text{F}$). After flexing, test for water permeability as in test procedure #3 except that the orifice of the tester shall be modified to accommodate the smaller specimen size

5. One 35.56 cm (14") by full width specimen shall be selected from each sample unit. The specimens shall be agitated using the 'normal' cycle in an automatic home laundering as specified in AATCC 135-2012 except that the machine shall be capable of continuous agitation. The water level shall be maintained at $72.74\ell \pm 4.55\ell$ (16 ± 1 gallons), and the water temperature shall be $32^{\circ}\text{C} \pm 9^{\circ}\text{C}$. The load shall be $.91 \text{ kg} \pm .09 \text{ kg}$ ($2 \text{ lbs} \pm 0.2 \text{ lbs}$). The specimen shall be removed from the washer after 100 hours of continuous agitation. The specimen shall be air dried and then tested for water permeability at three sites across the width of the specimen according to test procedure #3.
6. The water pressure shall be applied to the knit side of the laminated cloth from below the test specimen. The maximum pressure of 172.25 kPa (25 psi) shall be attained in 2 minutes ± 20 seconds and shall be applied for 5 minutes. Leakage is defined as the appearance of water any place within the test area.
7. Place a 15.24 cm x 15.24 cm (6" x 6") piece of blotting paper on a flat surface and cover with a 25.4 cm x 25.4 cm (10" x 10") test specimen with the face side up. Weigh out $2.0 \text{ gm} \pm 0.1 \text{ gm}$ ($.07 \text{ oz} \pm .004 \text{ oz}$) of solid contaminant or pipette 2.0 ml (.07 f. oz) of a liquid contaminant. Place the contaminant on the center of the specimen and cover with a 15.24 cm x 15.24 cm (6" x 6") piece of glassine paper. Place a 1.81 kg (4 lbs) weight on the glassine paper directly over the contaminated area. Allow the weight to remain on the specimen for 30 minutes. Remove the weight and glassine paper and allow the specimen to sit undisturbed for an additional 30 minutes. Wipe off any excess contaminant using a fresh piece of blotting paper and test for water permeability as per procedure #6 except that the water pressure shall be applied for 3 minutes.
8. One specimen per sample unit shall be tested for water permeability after exposure to synthetic perspiration. The specimen shall be not less than 15.24 cm (6") in diameter. The test cups shall accommodate this size specimen and shall have a depth of at least 2.5 cm (1"). The cups shall be sealed to prevent leakage. The solution shall contact the knit side of the laminate.

Synthetic perspiration shall be prepared by stirring the following ingredients into 500 ml of distilled water:

3 grams sodium chloride
1 gram predigested protein
1 gram n-propyl propionate
0.5 gram lecithin (phosphatidyl choline)

The predigested protein shall contain the following amino acids:

Ingredient

Milligrams (mg)

Lysine	82.5
Histidine	27.5
Arginine	40.0
Aspartic acid	72.5
Threonine	42.5
Serine	50.0
Glutamic acid	197.5
Proline	92.5
Glycine	22.5
Alanine	28.7
Cystine	4.7
Valine	66.2
Methionine	30.0
Isoleucine	53.8
Leucine	87.5
Tyrosine	51.3
Phenylalanine	48.8
Tryptophan	18.8

The solution shall be stirred continuously and heated to $50 \pm 1^\circ\text{C}$, then covered and cooled to approximately 35°C .

The solution shall be stirred such that any solid particles are suspended in solution and poured into the test cup. The cup shall be inverted to allow the synthetic perspiration to evaporate through the specimen.

After the solution has evaporated through the specimen, such that no more than .32 cm (0.125") of solution remains, the specimen shall be removed from the cup, rinsed in warm water, dried and tested for water permeability as specified in test procedure #6 except that the water pressure shall be applied for 3 minutes.

9. Method ASTM D3886-99 (2013) Procedure: Use No. 0 Emery Polishing Paper. Side abraded shall be the knit side, with a multidirectional abrasion motion. Change abradant after each 300 cycles or specimen failure. The air pressure under the diaphragm should be 4 psi, and the load on the abradant plate should be 1 lb. Failure is determined by breaking of the electrical contact.
10. A minimum of 3 straight seams and 2 cross-over seams shall be tested prior to laundry cycle testing and remain waterproof (no leakage) when tested at 13.78 kPa (2 psi) for 3 minutes with the seam tape side facing up, away from the water challenge. Leakage is defined as the appearance of water any place within the 11.43 cm (4.5") diameter test area since the seam tape process can damage the fabric adjacent to the tape. Test for water permeability as in procedure #3 except the face fabric shall face the water challenge.
11. A minimum of 3 straight seams and 2 cross-over seams shall be tested after ten (10) home laundry cycles and remain waterproof (no leakage) when tested at 13.78 kPa (2 psi) for 3 minutes with the seam tape side facing up, away from the water challenge. Leakage is defined as the appearance of water any place within the 11.43 cm (4.5") diameter test area since the

seam tape process can damage the fabric adjacent to the tape. Test for water permeability as in procedure #3 except the face fabric shall face the water challenge. Laundry testing should be performed in accordance with procedure specified in Machine Cycle 1, Wash Temperature 111, and Drying Procedure Ai of ANSI/AATCC 135-2012.

12. A minimum of 3 straight seams and 2 cross-over seams shall be tested after ten(10) dry clean cycles and remain waterproof (no leakage) when tested a 13.78 kPa (2 psi) for 3 minutes with the seam tape side facing up, away from the water challenge. Leakage is defined as the appearance of water any place within the 11.43 cm (4.5") diameter test area since the seam tape process can damage the fabric adjacent to the tape. Test for water permeability as in procedure #3 except the face fabric shall face the water challenge.

TABLE II
Properties of Laminated Shell Material I (Dark Navy Blue)

REQUIREMENTS			TEST METHODS
1	Mass (Laminated)	205 g/m ² (maximum.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 5.1-M90 (2013) ASTM D3776/D3776M-09a (2013)
2	Colour fastness to Light	Equal to AATCC Standard L5 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 18.3 ISO 105-B02:2014
3	Colour Fastness - To Crocking	Wet: Grey Scale 4 or better Dry: Grey Scale 4 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 22 AATCC 8-2013
4	Colour Fastness - To Laundering	Colour change: Grey Scale 4.5 or better Staining: Grey Scale 3 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 19.1 Test 2A AATCC 61-2013
5	Dimensional Change to Laundering	After 5 cycles: Not exceed $\pm 3\%$ length Not exceed $\pm 3\%$ width	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 58-2004, 3, E AATCC Method 135-2012 (1) (III) (Ai)
6	Breaking Strength - Grab Method	Warp 800 Newton (min.) Weft 800 Newton (min.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 9.2 ASTM D5034-09 (2013)
7	Tearing Strength	Warp 20 Newton (min.) Weft 20 Newton (min.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 12.3 ISO 13937-1:2000 ASTM D1424-09 (2013)
8	Abrasion Resistance - Martindale Method Part 2 (Determination of Specimen Breakdown)	No breakdown after 10,000 at 9 kPa	<ul style="list-style-type: none"> ASTM D4966-12
9	DWR (durable water repellent)	- 100 spray rating. Initial - 90 spray rating. After 5 launderings - 80 spray rating. After 10 launderings	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 26.2 Perma Press washing cycles (Washing Temp. 40°C \pm 3°C) Tumble Dry - Perma Press for 30 minutes as per (AATCC Method 135-2012)
10	Oil Repellent	- 6 Initial - 5 After 5 launderings - 4 After 10 launderings	<ul style="list-style-type: none"> AATCC 118-2013 Perma Press washing cycles (Washing Temp. 40°C \pm 3°C) Tumble Dry - Perma Press for 30 minutes as per (AATCC Method 135-2012)

TABLE III
Mesh, Pocketing

REQUIREMENT			TEST METHODS
1	Colour	Black or Navy To match colour swatch provided by Uniform and Equipment Program	
2	Fiber Content	100% Polyester	• CAN/CGSB-4.2 Method 14-2005
3	Knit Construction	Warp Knit	
4	Yarns per cm	Wales: 13 ± 3 Courses: 11 ± 3	• CAN/CGSB-4.2 Method 7- M88 (2001) • ISO 7211-2
5	Mass	$115 \text{ g/m}^2 \pm 6 \text{ g/m}^2$ ($109 \text{ g/m}^2 - 121 \text{ g/m}^2$)	• CAN/CGSB-4.2 Method 5.1-M90 (2013) • ASTM D3776/D3776M-09a (2013)
6	Dimensional Change to Domestic Washing <i>After 5 cycles</i>	Warp 4% (max.) Weft 3% (max.)	• CAN/CGSB-4.2 Method 58-2004,3,E
7	Colour fastness to Crocking Wet & Dry	Dry - Grey Scale 4 or better Wet - Grey Scale 4 or better	• CAN/CGSB-4.2 Method 22-2004
8	Colour fastness to Washing	Colour change Grey Scale 4 or better Staining cotton - Grey Scale 4 or better Staining polyester – Grey Scale 4 or better	• CAN/CGSB-4.2 Method 19.1-2004 Test #2 • AATCC 61-2013
9	Mullen Burst (psi)	100 (minimum)	• ASTM D3786/D3786M-13
10	Abrasion Resistance - Martindale Method Part 2 (Determination of Specimen Breakdown)	No breakdown after 25,000 at 9 kPa	• ASTM D4966-12
11	Pilling	No less than 4 after 120 minutes	• CAN/CGSB-4.2 Method 51.2-M87

TABLE IV
Properties of Laminated Shell Material II (Fluorescent Yellow-Green)
CSA-Z96-15 High Visibility Apparel Requirements (Meeting or Exceeding)

REQUIREMENTS			TEST METHODS
1	Mass (Laminated)	205 g/m ² (maximum.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 5.1-M90 (2013) ASTM D3776/D3776M-09a (2013)
2	Background - Material Colour	Initial: CSA-Z96-15, Table 2A - Fluorescent yellow-green	<ul style="list-style-type: none"> ASTM E1164-12
		After colourfastness to light (AATCC 16 Test Option E, 40 AATCC Fading Units): CSA-Z96-15, Table 2A - Fluorescent yellow-green	
3	Colour Fastness - To Light (Xenon)	Light fastness shall be equal or better than Grade 4 by Grey Scale for Colour change after 40 AATCC Fading Units.	<ul style="list-style-type: none"> AATCC 16.3-2014 Test Option E ISO 105-B02:2014
4	Colour Fastness - To Crocking	Wet: Grey Scale 4 or better Dry: Grey Scale 4 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 22 AATCC 8-2013
5	Colour Fastness - To Perspiration	Colour change: Grey Scale 4 or better Staining: Grey Scale 4 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 23-M90 AATCC 15-2013
6	Colour Fastness - To Laundering	Colour change: Grey Scale 4.5 or better Staining: Grey Scale 3 or better	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 19.1 Test 2A AATCC 61-2013
7	Dimensional Change to Laundering	After 5 cycles: Not exceed $\pm 3\%$ length Not exceed $\pm 3\%$ width	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 58-2004, 3, E AATCC Method 135-2012 (1) (III) (Ai)
8	Breaking Strength	Warp: 550N (min.) Weft: 450N (min.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 9.2 ASTM D5034-09 (2013)
9	Tearing Strength	Warp 15 Newtons (min.) Weft 14 Newtons (min.)	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 12.3 ISO 13937-1:2000 ASTM D1424-09 (2013)
10	Abrasion Resistance - Martindale Method Part 2 (Determination of Specimen Breakdown)	No breakdown after 10,000 at 9 kPa	<ul style="list-style-type: none"> ASTM D4966-12
11	DWR (durable water repellent)	- 100 spray rating. Initial - 90 spray rating. After 5 launderings - 80 spray rating. After 10 launderings	<ul style="list-style-type: none"> CAN/CGSB-4.2 Method 26.2 Perma Press washing cycles (Washing Temp. 40°C \pm 3°C) Tumble Dry - Perma Press for 30 minutes as per (AATCC Method 135-2012)
12	Oil Repellent	- 6 Initial - 5 After 5 launderings - 4 After 10 launderings	<ul style="list-style-type: none"> AATCC 118-2013 Perma Press washing cycles (Washing Temp. 40°C \pm 3°C) Tumble Dry - Perma Press for 30 minutes as per (AATCC Method 135-2012)

APPENDIX A

Sealed Pattern Identifier

Pattern #: G.S. 1045-310

Title: Jacket, High Visibility

Paper Patterns - Paper patterns are available from the RCMP, Uniform and Equipment Program, Ottawa Ontario, under Pattern # G.S. 1045-310. 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 seam allowances 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. **Punch holes are not an acceptable method of placement for this garment with the exception of the placement of the shoulder badge and the holes must be completely covered by the shoulder badge. Placement markings used for the retroreflective pattern must be covered or removed and shall not be visible on the finished garment. Shrinkage has not been included in any pattern piece. It is the responsibility of the manufacturer to make allowances for shrinkage in order to meet the scale of measurements included in this specification.**

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

Pattern Pieces - This design has 36 pattern components.

<u>Legend:</u>	
Shell Material I	= Para. 4.1.3.1 (Dark Navy Blue)
Shell Material II	= Para. 4.1.3.2 ((fluorescent yellow-green))
Shell Material I, (Tricot RSU)	= Para. 4.1.3.1 with Tricot (inside face) Right Side Up
Shell Material II, (Tricot RSU)	= Para. 4.1.3.2 ((fluorescent yellow-green))
Mesh Pocketing	= Para. 4.1.6
Cut 1 Single	= Cut 1
Cut 1 Paired	= Cut 2
Cut 2 Paired	= Cut 4
(RSU)	= Right Side Up

Pattern Components	Nomenclature	Quantity to be cut	Material
# 1 of 36	Upper Back	1 Single	Shell Material II
# 2 of 36	Lower Back	1 Single	Shell Material I
# 3 of 36	Front - Upper Right	1 Single	Shell Material II (RSU)
# 4 of 36	Front - Upper Left	1 Single	Shell Material II (RSU)
# 5 of 36	Lower Front	1 Paired	Shell Material I
# 6 of 36	Under Fly Front	1 Paired	Shell Material II

Pattern Components	Nomenclature	Quantity to be cut	Material
# 7 of 36	Storm Flap - Upper Left	1 Single	Shell Material II (RSU)
# 8 of 36	Storm Flap - Lower Left	1 Single	Shell Material II (RSU)
# 9 of 36	Storm Flap - Upper Right	1 Single	Shell Material II (RSU)
# 10 of 36	Storm Flap - Lower Right	1 Single	Shell Material I (RSU)
# 11 of 36	Shoulder Strap	2 Paired	Shell Material II
# 12 of 36	Front Facing "A"	1 Paired	Shell Material II
# 13 of 36	Front Facing "B"	1 Paired	Shell Material II
# 14 of 36	Sleeve	1 Paired	Shell Material II
# 15 of 36	Sleeve - Upper Back	1 Paired	Shell Material II
# 16 of 36	Sleeve - Lower Back	1 Paired	Shell Material II
# 17 of 36	Cuff	1 Paired	Shell Material I
# 18 of 36	Elasticized Cuff	1 Paired	Shell Material I
# 19 of 36	Cuff Adjustment Strap	1 Paired	Shell Material I
# 20 of 36	Top Collar	1 Single	Shell Material II
# 21 of 36	Under Collar	1 Single	Shell Material II
# 22 of 36	Hood Side	1 Paired	Shell Material II
# 23 of 36	Hood Center	1 Single	Shell Material II
# 24 of 36	Hood Back	1 Single	Shell Material II
# 25 of 36	Hem Facing - Front	1 Paired	Shell Material I (RSU)
# 26 of 36	Hem Facing - Back	1 Single	Shell Material I (Tricot RSU)
# 27 of 36	Top Collar Stand	1 Single	Shell Material II (Tricot RSU)
# 28 of 36	Hood Facing-Inside Front	1 Paired	Shell Material II (Tricot RSU)
# 29 of 36	Hood Facing-Inside Back	1 Single	Shell Material II (Tricot RSU)
# 30 of 36	Pocket Flap - Chest	2 Paired	Shell Material II
# 31 of 36	Pen Loop	1 Single	Shell Material II
# 32 of 36	Pocket - Upper Sleeve	1 Paired	Shell Material II
# 33 of 36	Pocket Bag - Chest "A"	1 Paired	Mesh Pocketing
# 34 of 36	Pocket Bag - Chest "B"	1 Paired	Mesh Pocketing
# 35 of 36	Pocket Bag - Inside Chest	1 Paired	Mesh Pocketing
# 36 of 36	Pocket Bag - Inside Chest Facing	1 Paired	Shell Material I

APPENDIX B

CARE INSTRUCTIONS

Applicable To:

Jacket Patrol Unisex
Jacket High Visibility
Parka Inclement & Hood Cold Weather (without the fur trim)
Trouser Inclement

These garments are designed to be both waterproof and water repellent. The best way to maintain its performance is to **keep them clean by washing it regularly**. When the water no longer beads up and rolls off, use a water based, solvent free, nonflammable DWR product to restore the water repellency. The following care instructions should ensure a normal life cycle for your garments. These garments should be washed after 10-12 days of continuous use or every 20-30 days with occasional use.

The water repellency, waterproofness and breathability of your garment are affected by the following;

1. Dirt buildup and other contaminants including oils, sunscreen and sweat reduce the effectiveness of the water repellency.
2. Fabric softeners have a detrimental effect on the colour and the waterproofness and water repellency of the fabric. They will make the colour fade more quickly and affect the overall performance of the fabric. These include liquid fabric softeners, detergents that contain softeners and dryer sheets. Therefore it is very important that these softeners not be used when laundering your garment.

Machine Wash:

- DO NOT COMMERCIAL LAUNDRY
- DO NOT WASH FUR

Close all zippers, fasteners and velcro before washing.

Wash in warm water separately, without detergent. **DO NOT USE FABRIC SOFTENERS OR POWDERED DETERGENTS OR ANY LIQUID DETERGENTS THAT CONTAIN FABRIC SOFTENERS. DO NOT USE BLEACH.**

If heavily soiled, a small amount of detergent or specialty wash products (**i.e. Grangers® Performance Wash, Fibertec Pro Wash or ReviveX® Synthetic fabric cleaner**) for waterproof garments may be used.

At the end of the final rinse cycle, re-adjust the garment in the washer, and put it through an additional rinse cycle. This will assure complete rinsing of detergent that may have been trapped during washing, therefore preserving water repellency.

Drying:

Close all zippers, fasteners and velcro before drying.

If re-application of DWR is necessary, hang wet garment on hanger and follow application instructions of DWR product. (**i.e. Grangers® XT Waterproof spray, Fibertec Blue Guard Spray-on, Revivex® Spray-On or Nikwax Tx-Direct™**)

The garment **must** be tumble dried separately on a warm setting for 50 minutes to reactivate the durable water repellency (DWR.). **DO NOT USE DRYER SHEETS.**

If necessary, touch up with steam iron at low temperature.

Dry Cleaning:

If dry cleaned, request clear distilled solvent rinse and DWR spray repellent.

INSTRUCTIONS D'ENTRETIEN

Applicable à :

Blouson de patrouille unisexe

Veste haute visibilité

Parka pour intempéries et capuchon pour temps froid (sans la bordure de fourrure)

Pantalon pour intempéries

Ces vêtements sont conçus pour être imperméables et déperlants. La meilleure façon de préserver leurs propriétés est de les **garder propres en les lavant régulièrement**. Lorsque l'eau ne perle plus, utiliser un produit déperlant durable à base d'eau, sans solvant et ininflammable pour restaurer la déperlance. Les instructions d'entretien ci-dessous permettront d'assurer le rendement optimal des vêtements. Ces vêtements devraient être lavés après 10 à 12 jours d'utilisation continue ou à tous les 20 à 30 jours d'utilisation occasionnelle.

Les conditions suivantes peuvent influencer sur l'imperméabilité, la déperlance et la respirabilité des vêtements :

1. L'accumulation de saletés et d'autres contaminants comme de l'huile, de la crème solaire ou de la sueur peut réduire l'imperméabilité.
2. Les agents assouplissants influent sur la couleur, la déperlance et l'imperméabilité. Ils décolorent les tissus plus rapidement et nuisent à leur rendement général. Il est très important de n'utiliser **aucun** type d'assouplissant (agent assouplissant liquide, détergent avec assouplissant et assouplissant en feuilles).

Lavage à la machine :

- NE PAS LAVER DANS UNE BUANDERIE COMMERCIALE
- NE PAS LAVER LA FOURRURE

Fermer toutes les fermetures à glissière, les attaches et les attaches à ruban autoagrippant avant de laver.

Laver séparément à l'eau tiède, sans détergent. NE PAS UTILISER D'AGENT ASSOUPLISSANT NI DE DÉTERGENT EN POUDRE OU LIQUIDE AVEC ASSOUPLISSANT. NE PAS UTILISER D'AGENT DE BLANCHIMENT.

Si le vêtement est très sale, une petite quantité de détergent ou de produit spécifiquement conçu pour l'entretien des vêtements imperméables (**p. ex. nettoyant haute performance de Granger's^{MD}, produit Pro Wash de Fibertec ou nettoyant pour tissus synthétiques ReviveX^{MD}**) peut être utilisée.

À la fin du dernier cycle de rinçage, replacer le vêtement dans la machine et entreprendre un autre cycle de rinçage, afin d'éliminer complètement le détergent qui peut être resté durant le lavage et de préserver la déperlance.

Séchage:

Fermer toutes les fermetures à glissière, les attaches et les attaches à ruban autoagrippant avant de sécher.

Si un nouveau traitement déperlant est requis, suspendre le vêtement mouillé sur un cintre et suivre les instructions du fabricant du produit (**p. ex. imperméabilisant à vaporiser XT de Granger's^{MD}, Blue Guard de Fibertec, Revivex^{MD} ou Tx-Direct^{MC} de Nikwax**).

Le vêtement **doit** être séché séparément par culbutage à basse température pendant 50 minutes, afin de réactiver les propriétés déperlantes. NE PAS UTILISER D'ASSOUPLISSANT EN FEUILLES.

Au besoin, repasser légèrement à basse température.

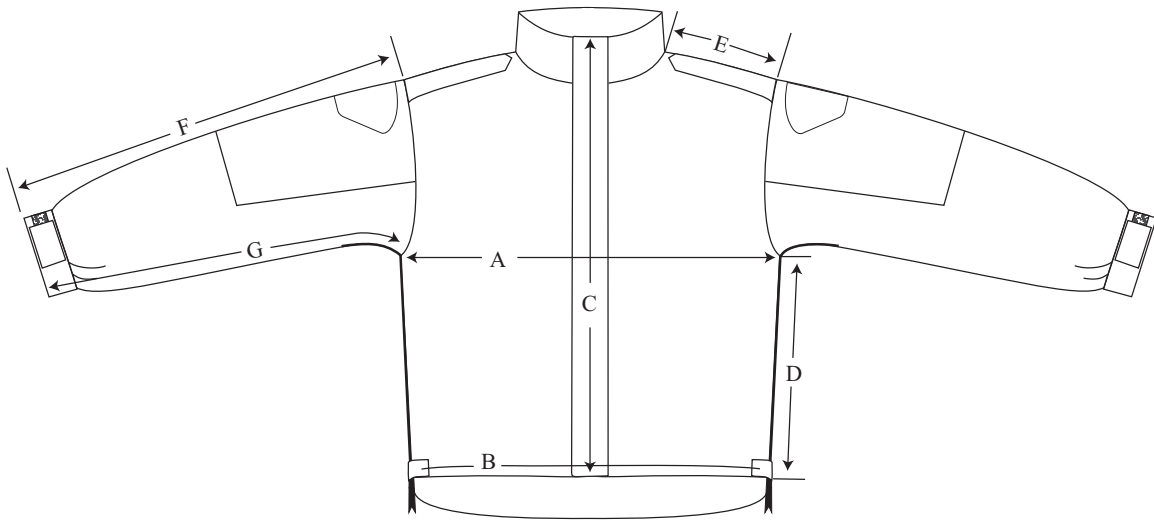
Nettoyage à sec :

Si le vêtement est nettoyé à sec, demander un rinçage avec un solvant distillé clair et un traitement à l'aide d'un produit déperlant à vaporiser.

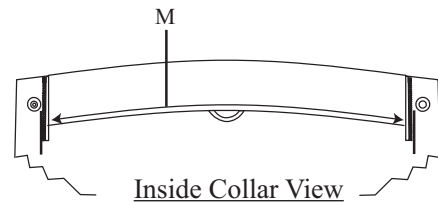
Jacket, High Visibility
Measurement Location Chart

G.S.1045-310

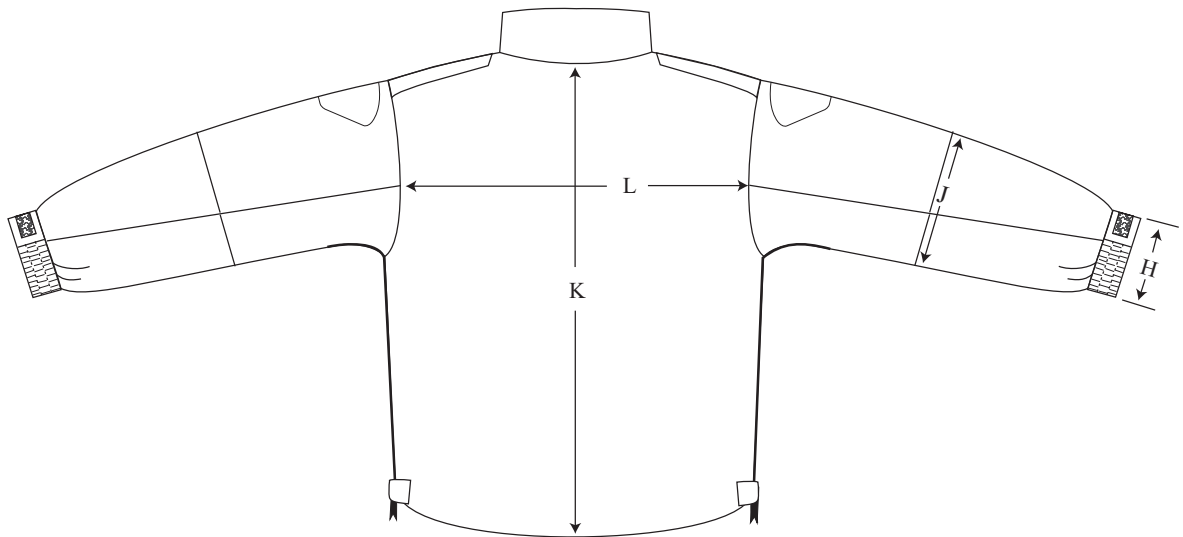
Dwg. 1



Front View



Inside Collar View



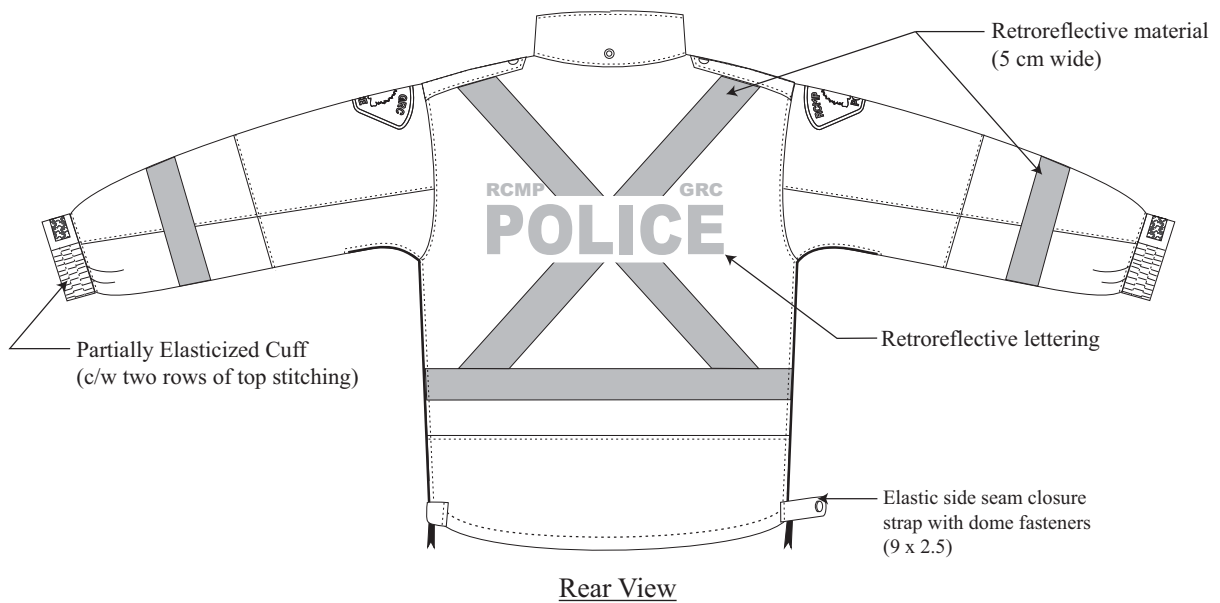
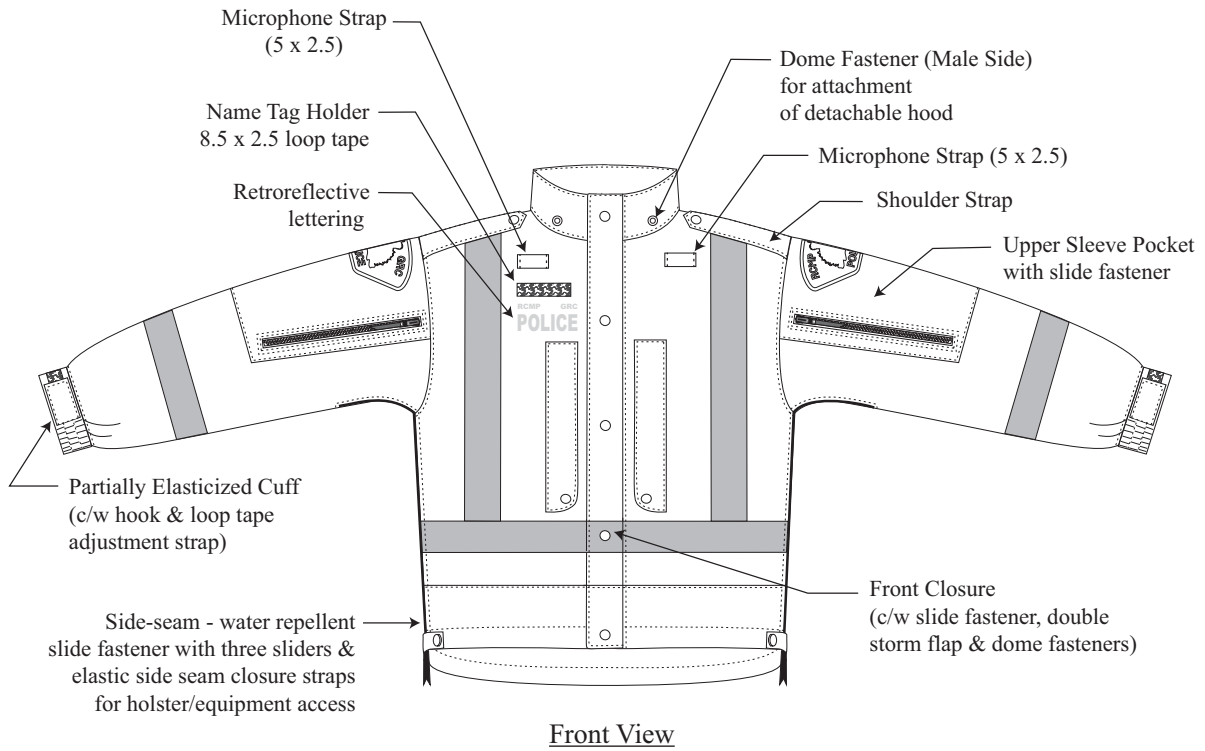
Rear View

NOT TO SCALE

Jacket, High Visibility

G.S.1045-310

Dwg. 2



NOT TO SCALE

All measurements are shown in centimeters.

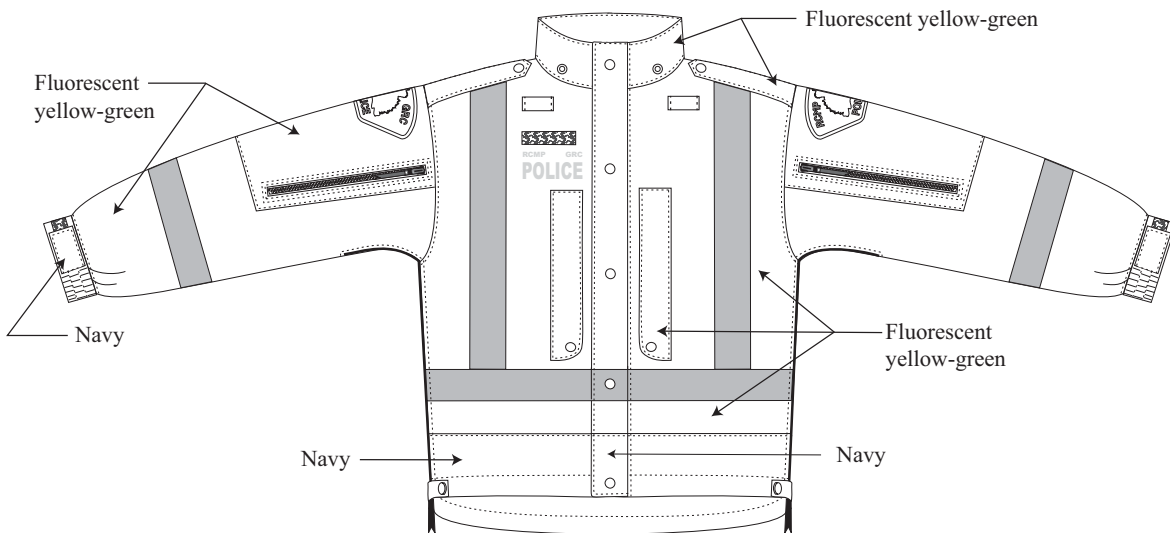
± 0.5cm tolerance acceptable unless otherwise indicated.

Jacket, High Visibility

G.S.1045-310

Colour Location

Dwg. 3



Front View



Rear View

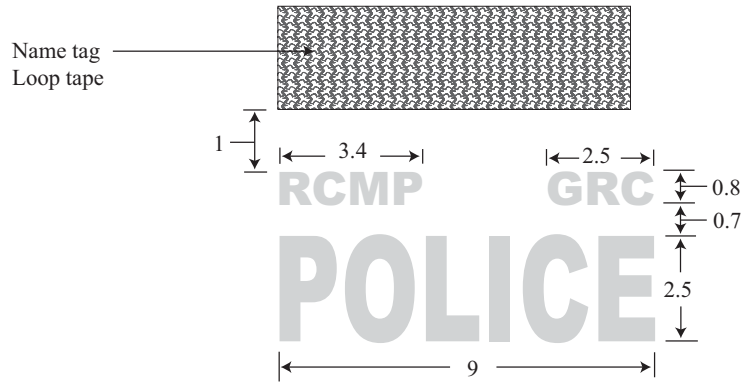
NOT TO SCALE

Jacket, High Visibility

G.S.1045-310

Police Lettering

Dwg. 4



Front Retroreflective Lettering



Back Retroreflective Lettering

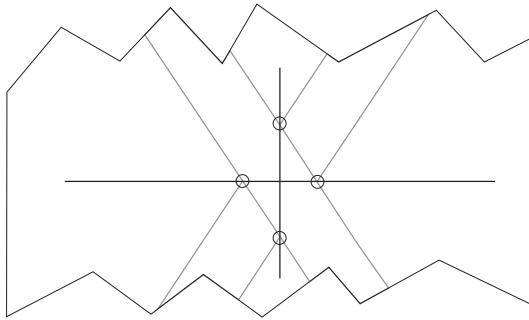
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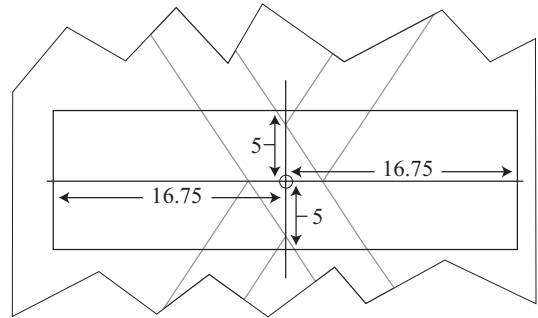
± 0.5cm tolerance acceptable unless otherwise indicated.

Jacket, High Visibility
Lettering placement for back
Dwg. 5

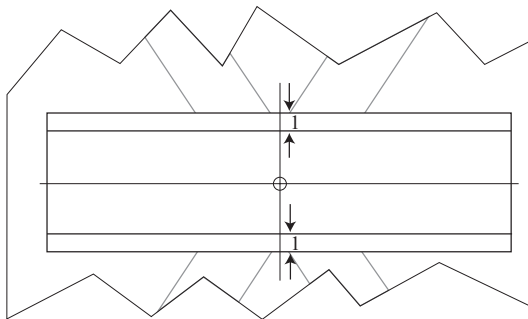
G.S.1045-310



Locate center with vertical and horizontal lines



Measure distances vertically and horizontally from center and mark.
This defines the retroreflective break.



Measure vertically towards center 1 cm and mark



This defines the placement for POLICE.



Extend the lines vertically at each end.
This defines the placement for the RCMP and GRC.



NOT TO SCALE

All measurements are shown in centimeters.

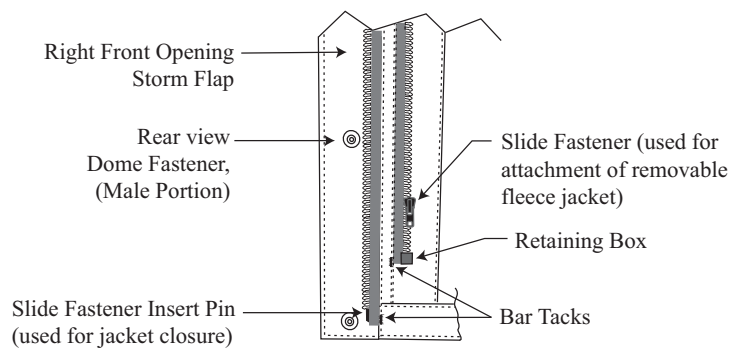
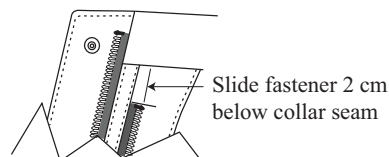
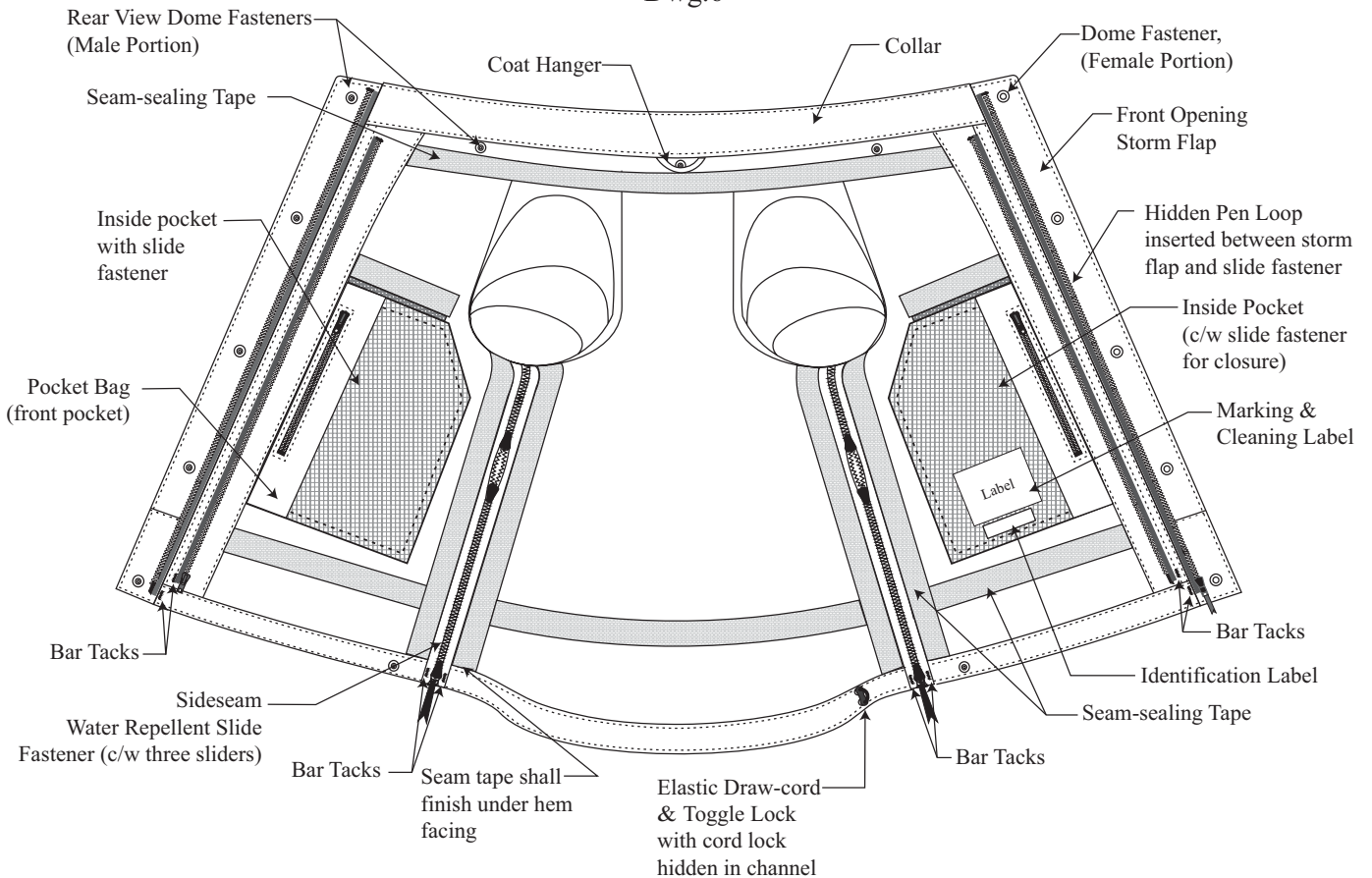
± 0.5cm tolerance acceptable unless otherwise indicated.

Jacket, High Visibility

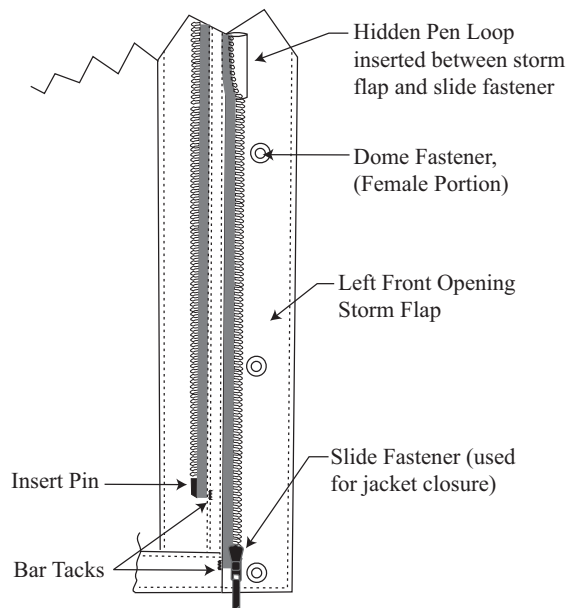
G.S.1045-310

Inside Jacket & Slide Fastener Detail

Dwg.6



Slide Fastener Detail
Right Front (Inside View)



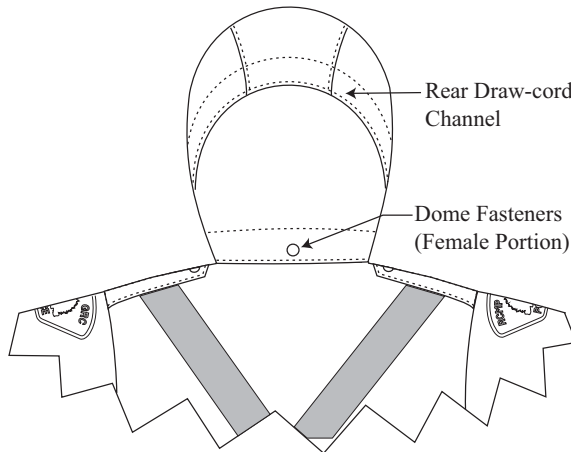
Slide Fastener Detail
Left Front (Inside View)

NOT TO SCALE

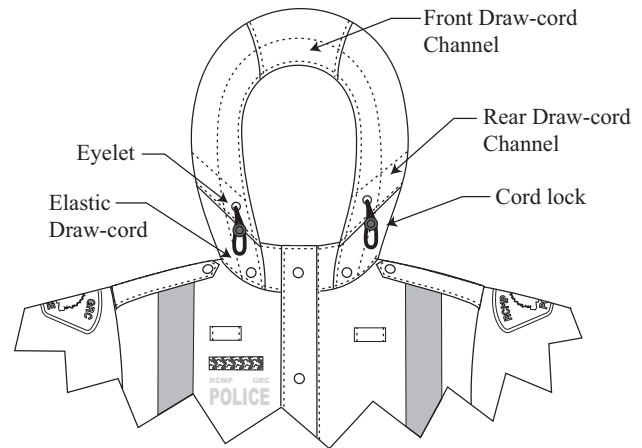
All measurements are shown in centimeters.
± 0.5cm tolerance acceptable unless otherwise indicated.

Jacket, High Visibility
Detachable Hood
& Adjustment Strap Detail
Dwg. 7

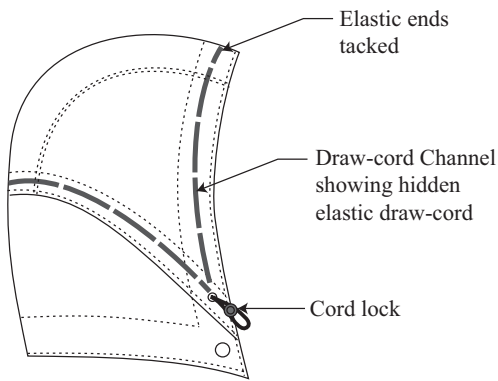
G.S.1045-310



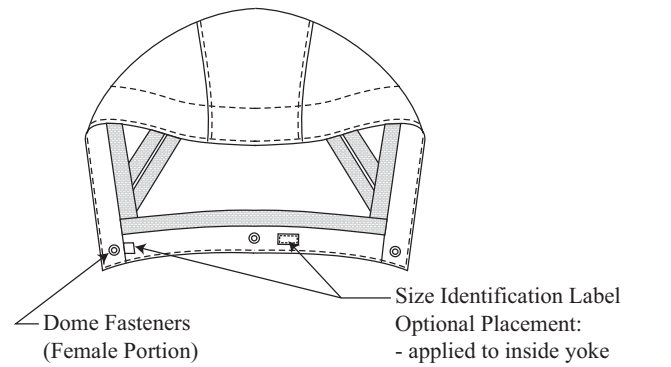
Rear View



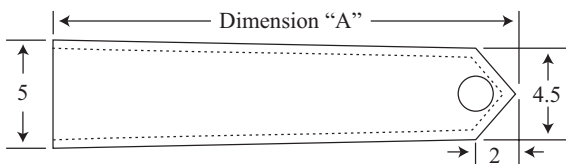
Front View



Side View



Inside Front View



Shoulder Strap Detail

Jacket Size (All Heights)	Dimension "A"
X-Small	14.25
Small	15.25
Medium	16.25
Large	17.25
X-Large	18.25
2X-Large	19.25
3X-Large	20.25
4X-Large	21.25
5X-Large	22.25

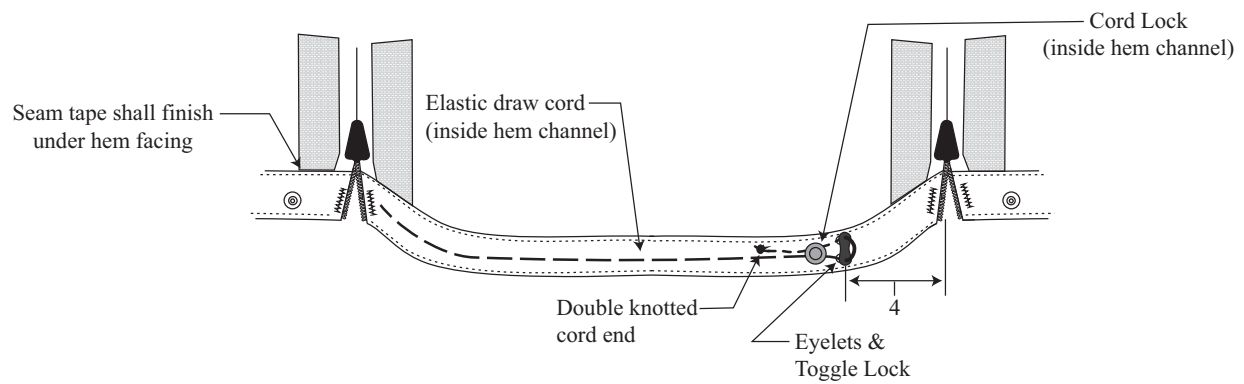
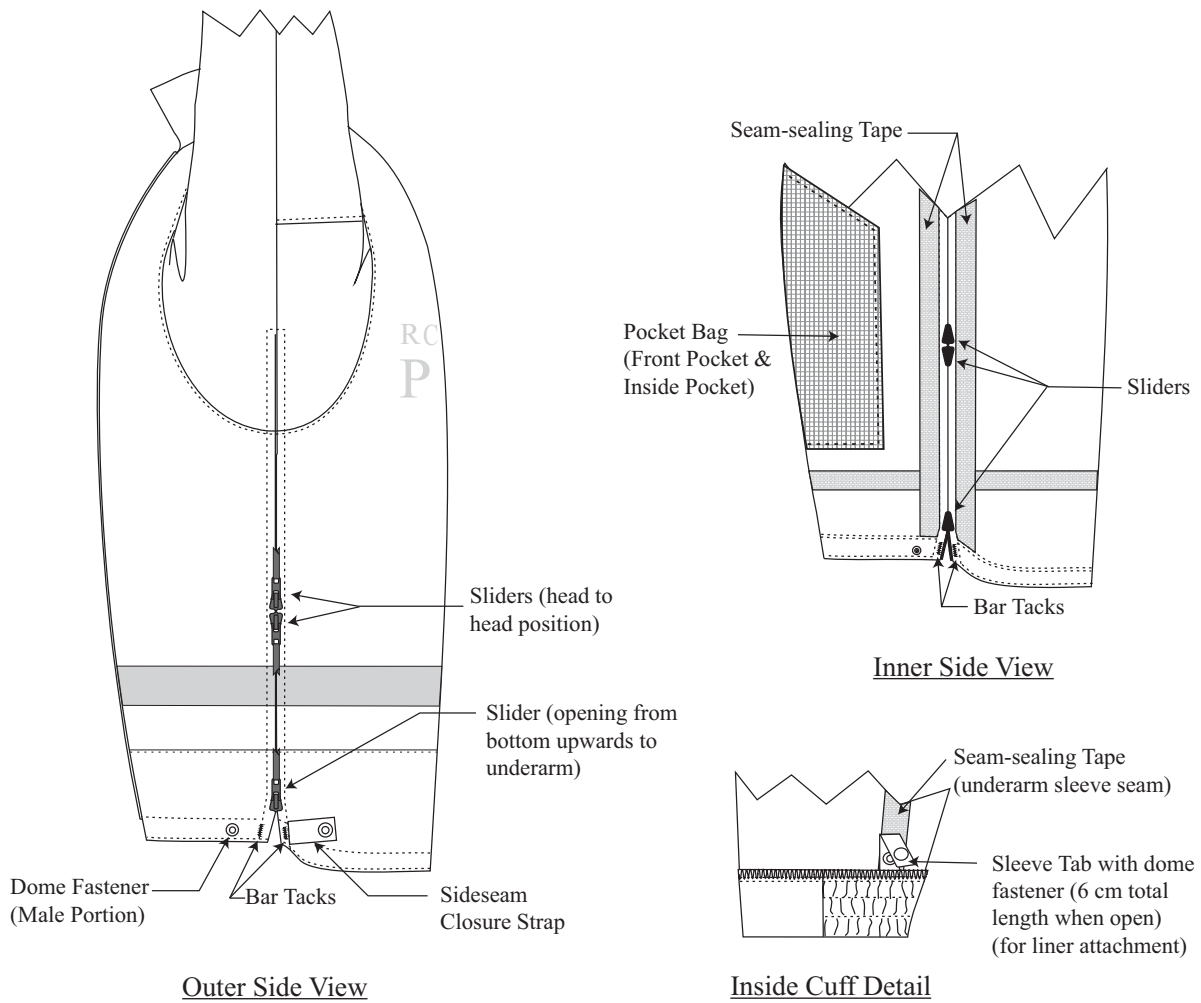
TABLE I
Shoulder Strap Length
(Finished)

NOT TO SCALE

All measurements are shown in centimeters.

± 0.5cm tolerance acceptable unless otherwise indicated.

Underarm Detail
& Back Hem Channel Detail
Dwg. 8



Back Hem Channel - Inside View

NOT TO SCALE

All measurements are shown in centimeters.

± 0.5cm tolerance acceptable unless otherwise indicated.