

Minimum Construction Standards

All Outerwear must follow the Woven Minimum Construction Standards. The items listed below are additional requirements to these Standards. Listed items are the minimum requirement for all private and exclusive brands unless otherwise specified in the style specific construction details by the TD.

How to use these Construction Standards:

- Outerwear product category applies to any product that is designed to be worn over other garments as outerwear and is made using fabrications/trims specific to Outerwear.
- Product Safety Standards** list additional requirements to meet CPSC and FTC requirements. Please see Performance Testing – Softlines – Apparel & Apparel Accessories on www.connection.kohls.com
- Pattern Matching Guidelines** are listed separately on www.connection.kohls.com
- Defect Classification** is listed separately. Please see Quality Assurance – Defect Classification on www.connection.kohls.com
- Underlined words have definitions/pictures in the Apparel Dictionary on www.connection.kohls.com under Private Brands tab/Technical Design
- Standards** followed by code (A-1, B-1, etc) have diagrams in the Construction Standard Appendix.
- Construction standards are updated twice a year – before Spring/Summer costing season and before Fall/Holiday costing season. When starting a costing season, vendors should always check www.connection.kohls.com for latest version of Construction Standards and check this summary page for updates.

Summary of Changes – NOTE PLEASE SEE FOLLOWING PAGES FOR FULL DETAILS

December 2013– Highlighted changes are effective for Fall/ Holiday 2014 Costing

Page 5, SECTION E - Trims / Findings: Revised zipper requirements to clarify use of autolock and semi-autolock zippers on bottoms (Pants, Shorts, Skirts, etc...)

Minimum Construction Standards

All Outerwear must follow the Woven Minimum Construction Standards. The items listed below are additional requirements to these Standards. Listed items are the minimum requirement for all private and exclusive brands unless otherwise specified in the style specific construction details by the TD.

SECTION A-Thread: Follow Woven's Minimum Construction requirements unless otherwise listed below.

Needle/Bobbin Thread Quality: Poly-wrap/Poly-Core for all programs.

Looper Thread Quality: Spun Polyester. Texturized polyester is subject to TD approval

Thread Size:

- **Down-Filled/Microfiber Polyester-filled outerwear Polyester/Nylon quilting:**
Needle/ Bobbin = Tex 24, Looper = Texturized Polyester Tex 35-40
- **Microfiber:** Needle/ Bobbin = Tex 30, Looper = Tex 21
- **Wool, Coated Nylon:** Needle/ Bobbin = Tex 40, Looper = Tex 40
- **Twill/Canvas/Corduroy:** Needle/ Bobbin = Tex 80, Looper = Tex 60
- **Faux Leather:** Needle = Tex 80, Bobbin = Tex 60, Looper = Tex 45

Large (> 40 Ligne) 4-hole or 2-hole CF Buttons: Nylon Thread, Tex 70

Shank Button sew thread quality:

- Light weight (nylon/Microfiber) Outerwear = Poly wrap/Polycore, Tex 40 **OR** Nylon Thread Tex30-45 may be required depending on button type/styling
- Heavy weight (Cotton, Canvas, faux leather) = Nylon thread, Tex 60-80
- Wool Dress/Tailored Outerwear = Acolite Thread, Tex 60-80

Blind hems: Continuous Filament Polyester – COATS GRAL Tex12 depending on fabrication weight - must source quality as specified – cannot use any monofilament nylon thread.

SECTION B-SPI Requirements:

- **Outerwear** = 8-10 SPI – may vary depending on fabrication.
- **Blind hems** = 4 – 4.5 SPI

SECTION C-Seam Requirements: Follow Woven's Minimum Construction requirements

- **Garment Washed:** All internal seams must be overedged (ISO 504) for both lined and unlined garments.

SECTION D-Construction:

Sleeve/Bottom Hem:

- **Blind hems** must be blind lock stitched (ISO 103). Overlap stop/start of blind hem $\frac{3}{4}$ " to 1". Pull thread through loop at the end of operation to lock the stitch. (D-5)
- **No stitch Hem Tacking:** Apply non-woven fusible, blind stitch or tack hem to body at seam allowances unless otherwise specified
- **Lined Shirt Jackets:** Must have a 1" to 1 $\frac{1}{4}$ " self facing at inside hem to prevent lining from rolling outward after wash.

Pockets:

- **Wool/Tailored Outerwear Exterior Welt Pockets or other specified pockets:** Machine baste closed with 1" opening at each end.

Pocket Bags:

- Tack pocket bags to nearest garment seam with a floating fabric tack.

Minimum Construction Standards

All Outerwear must follow the Woven Minimum Construction Standards. The items listed below are additional requirements to these Standards. Listed items are the minimum requirement for all private and exclusive brands unless otherwise specified in the style specific construction details by the TD.

Seams:

- **Unlined Outerwear:** Interior seams visible from front opening of jacket must be frenched seamed, felled, or have seam allowances finished with bound edges. Safetystitch can be approved on seams not visible when jacket is open – ex. Front yoke/princess/ AH seams.
- **Wool Outerwear:** Lockstitch ISO 301 or Chainstitch (ISO401) and pressed open
- **Pressing:** In process pressing required - press the following seams open: darts, side panel, side seam, CB seam, shoulders.
- **Linings/Shell Fabrications that fray easily:** Overlock (ISO 503) or (ISO 504) panel edges (shell and lining) with spun polyester tex 21 or texturized polyester Tex 18.

Woven Linings: secure lining into bottom hem/slv hem with ½” ease. (D-16)

Knit (Sherpa, faux fur, jersey) Linings with Woven Shell:

- Adjust lining pattern for differential shrinkage and differential fabric stretch.
- Tack lining to shell seam allowance with floating fabric tack at side seams 2” above hem to prevent lining from sagging below hem.

Wool Shoulder, Back Neck, Armholes and Center Front: Stabilized with fusible or twill tape.

Wool Upper Back/Around Armhole: Interlining required on upper back and around armhole.

Padding: Scrim requirement (E-7) – see Woven Minimum Standards.

SECTION E-Trims/Findings:

Closures: Hand-sewn Buttons are only permitted on Adult Outerwear.

- **Casual Hand-Sewn Shank Buttons** knotted once after vertical stitches. Hand sewn buttons not allowed on children’s garments.(E-3)
- **Casual Hand-Sewn Wrapped Shank Buttons** knotted once after vertical stitches, knotted once after horizontal wrap. (E-3)
- **Wool/Tailored Hand-Sewn Shank Buttons** knotted once after 2nd to last vertical stitch, knotted 2nd time after last vertical stitch. (E-3)
- **Wool/Tailored Hand-Sewn Wrapped Shank Buttons** knotted once after vertical stitch, knotted once after 2nd to last horizontal revolution, knotted a 2nd time after last horizontal revolution (E-3)

Zippers:

- All metal zippers for tops and outerwear at center front must have auto lock sliders.
- All coil zippers for tops and outerwear at center front must have auto lock or semi auto lock sliders.
- Separating Only: Must be left hand insert, right hand pull.

Separating Only: Reinforce zipper box/pin with Line tack or Bartack sewn on a 28 -stitch tacking machine. (E-1)

Interlining:

- All Garments: Required on lapel, top collar, pocket flaps/welts, vent openings
- Wool Garments: Above locations + front panel, upper back panel, chest piece and shoulder seam.
- **Woven Fusible Tape** required on lapel roll/crease line.
- **Felt** (Tailored Wool Outerwear) use under collar or as specified.

Shoulder Pads: Tack shoulder pad in 3 places –2 at armhole, 1 at shoulder seam near neck. Use specified tack method.

Minimum Construction Standards

All Outerwear must follow the Woven Minimum Construction Standards. The items listed below are additional requirements to these Standards. Listed items are the minimum requirement for all private and exclusive brands unless otherwise specified in the style specific construction details by the TD.

SECTION F-Cutting:

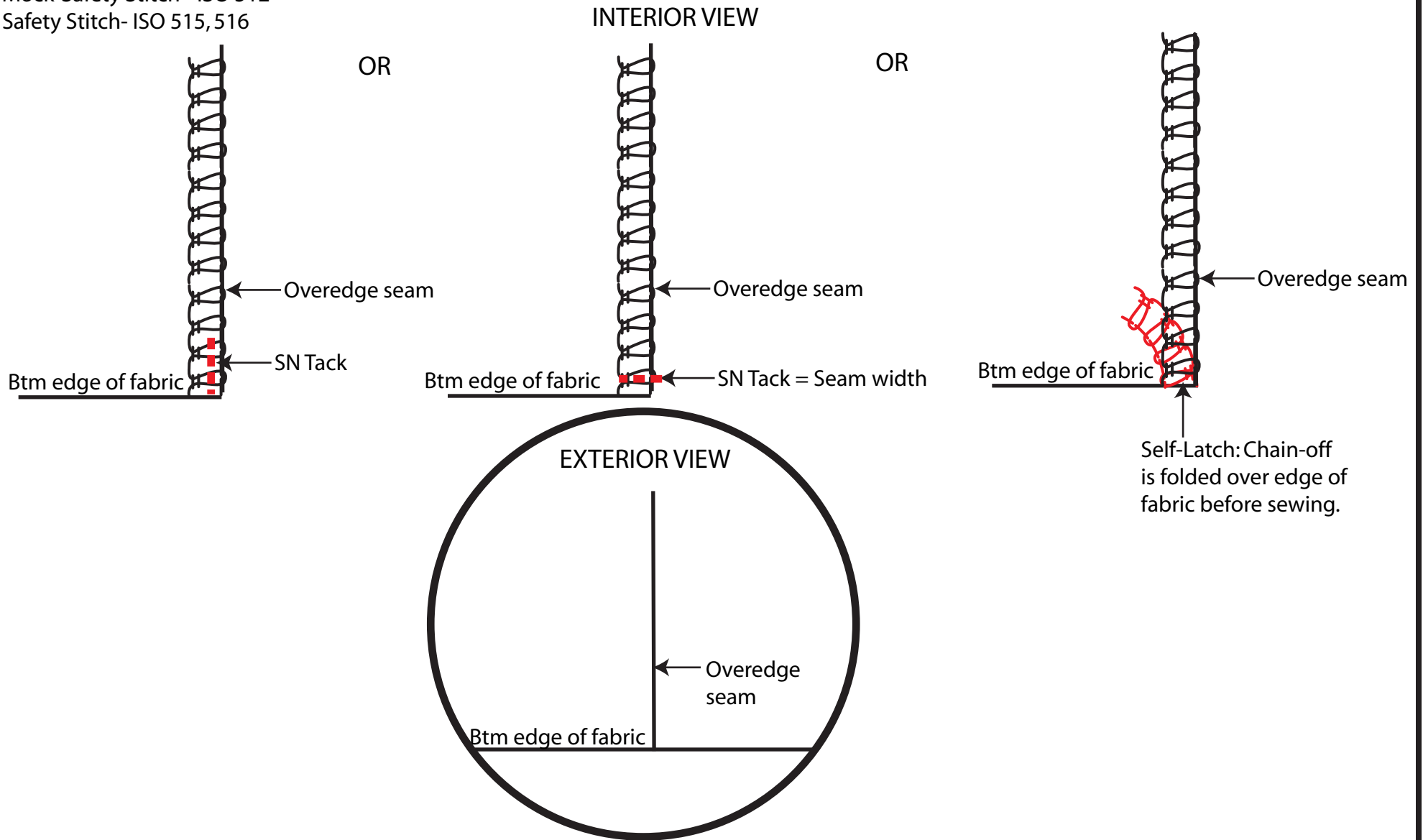
Cutting Direction:

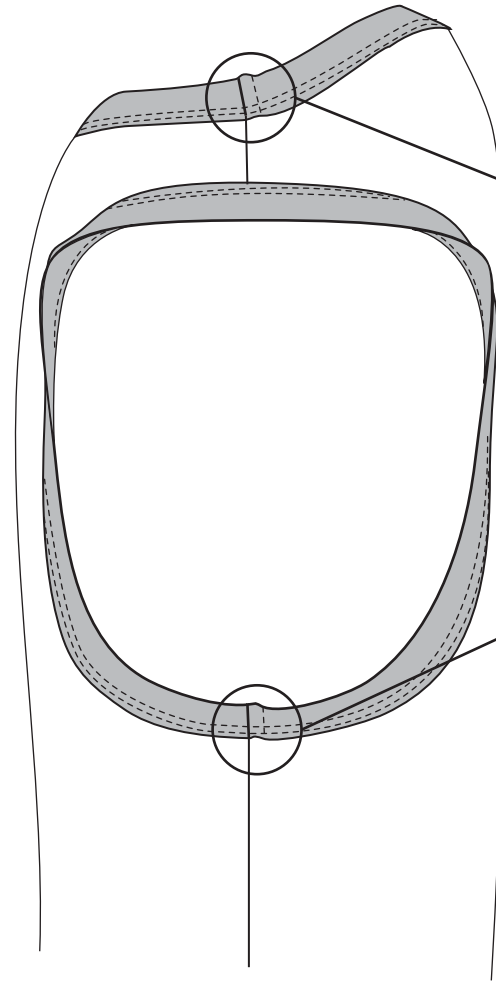
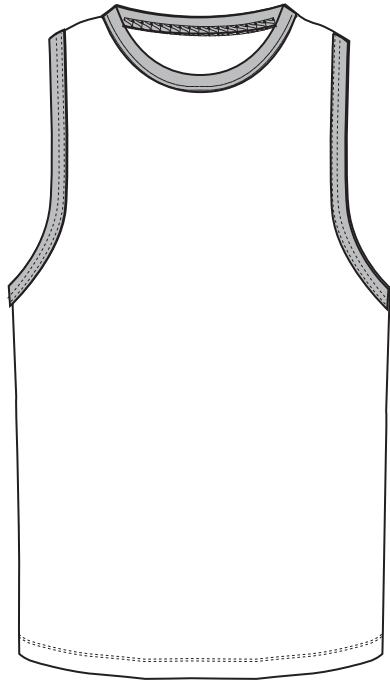
- **Napped fabrics:** Always verify w/ Brand Manager during costing stage!
- **Uneven/Directional plaids/stripes:** Depends on styling/plaid scale and contrast. Verify with Brand Manager or Production Controller during costing stage.

Construction Standards

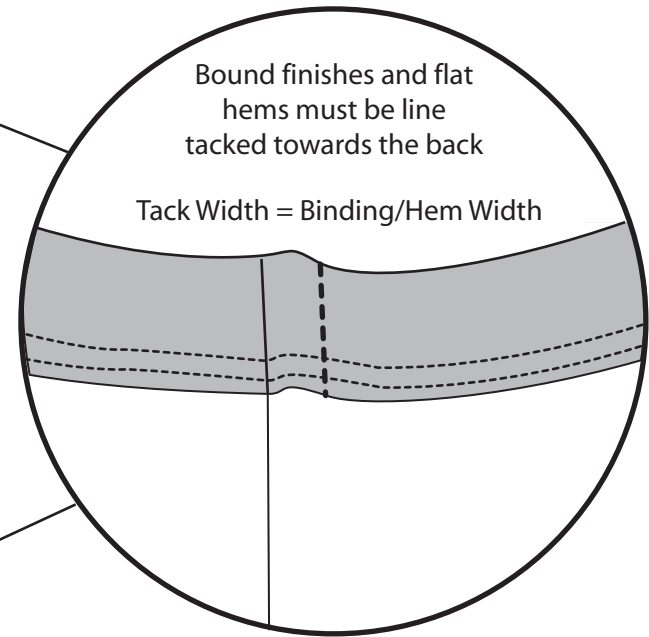
Appendix

Overedge Seam =
Overedge- ISO 503, 504, 505, 514
Mock-Safety Stitch - ISO 512
Safety Stitch- ISO 515, 516

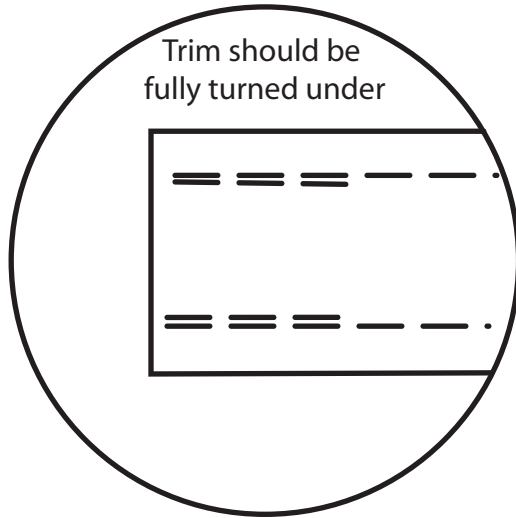




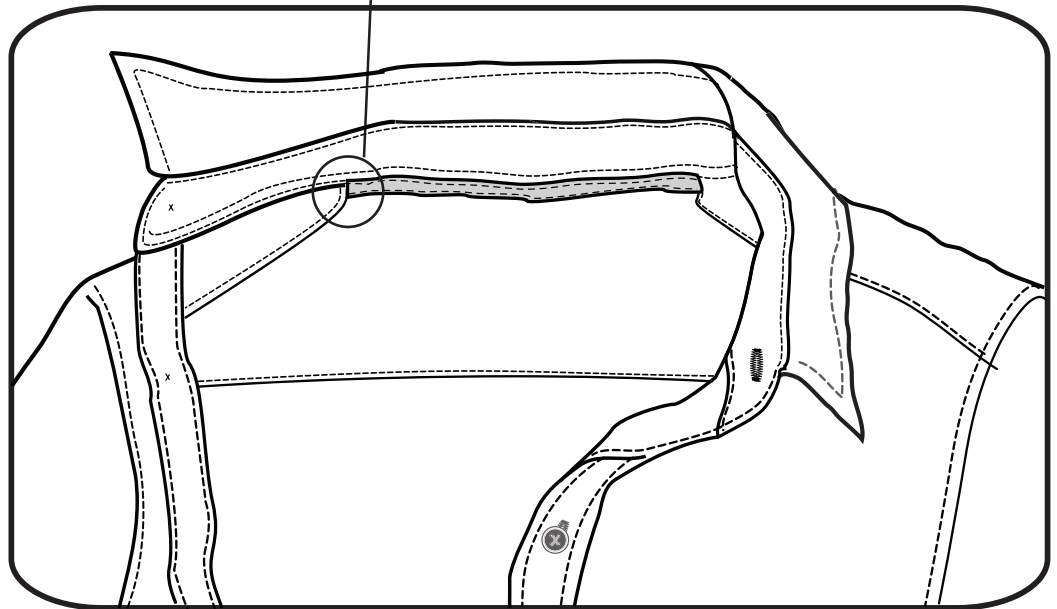
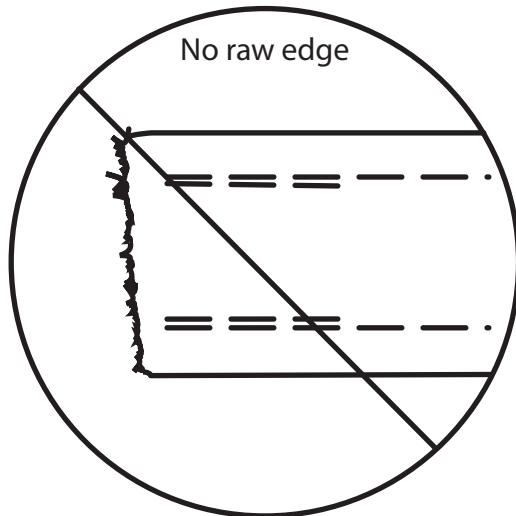
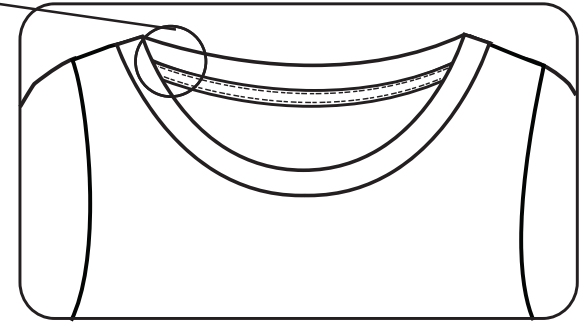
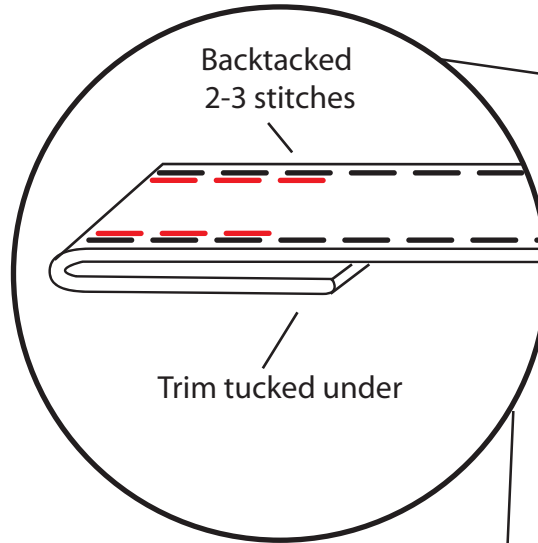
Side View

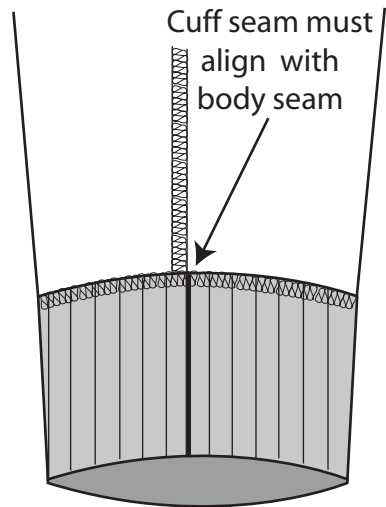


Top View

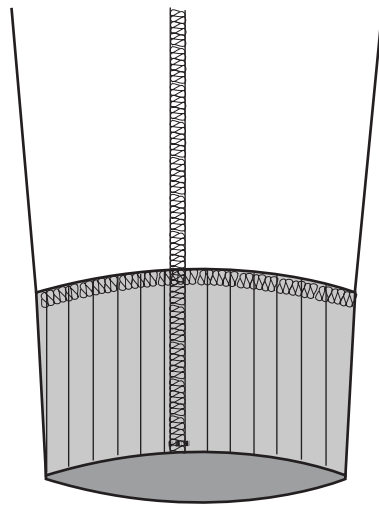


Cross Sectional View

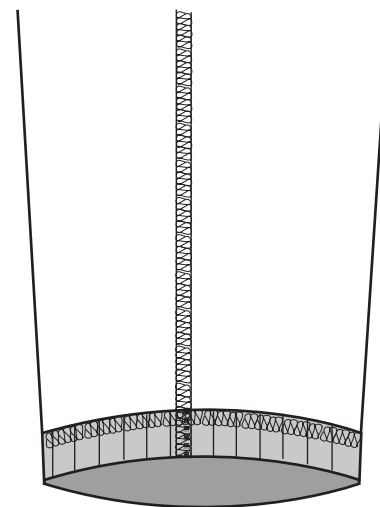




Circular (Preferred)

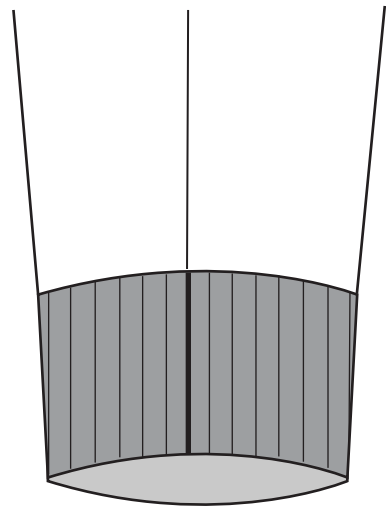


Not Circular - (Use only when trim height too wide or sleeve opening is too small)

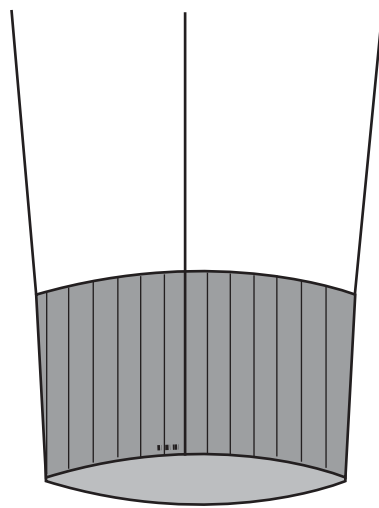


Not Circular - (Use only when sleeve opening is too small)

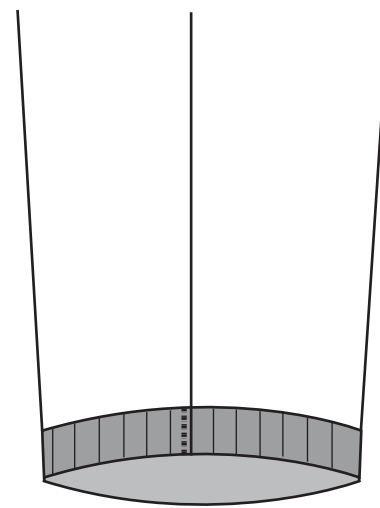
Interior View



Circular (Preferred)



Not Circular

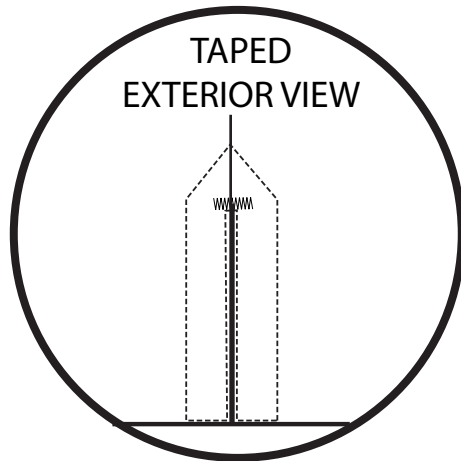
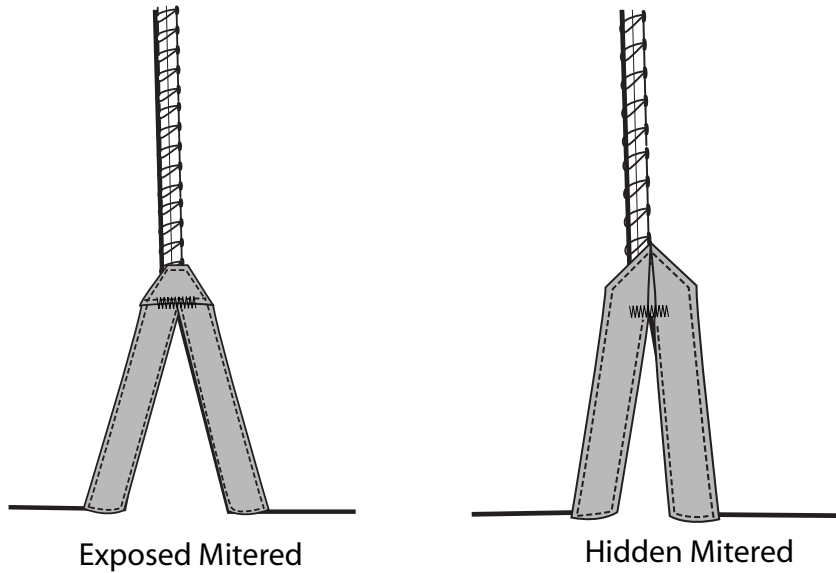


Not Circular

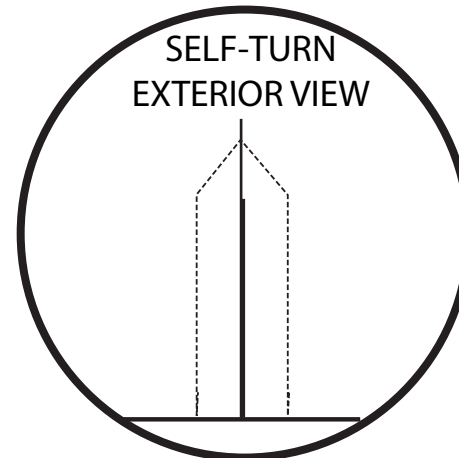
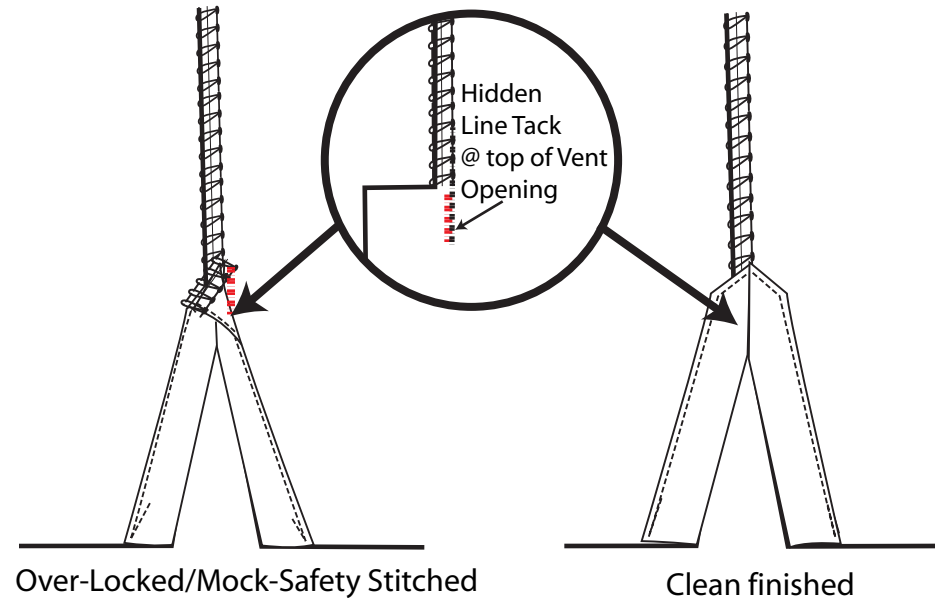
Exterior View

- Follow construction details sketch for styling details: Vent width, top of vent shape (miter or square), reinforcement visible or hidden.
- Do not clip through side seam stitching
- Reinforcement required at top of vent: Visible bartack or hidden line tack as specified.

TAPED - INTERIOR VIEW



SELF-TURN - INTERIOR VIEW



See Diagram 'C-1 Overedge Seams - End Finishing' if Side/Underarm Seam Construction =

Overedge- ISO 503, 504, 505, 514

Mock-Safety Stitch - ISO 512

Safety Stitch- ISO 515, 516

Side/Underarm Seam Construction =

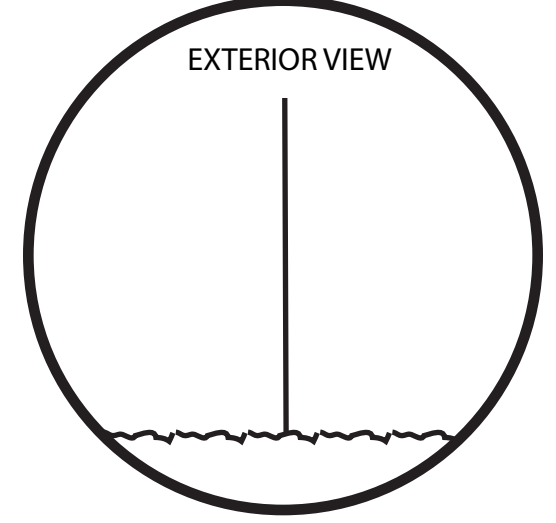
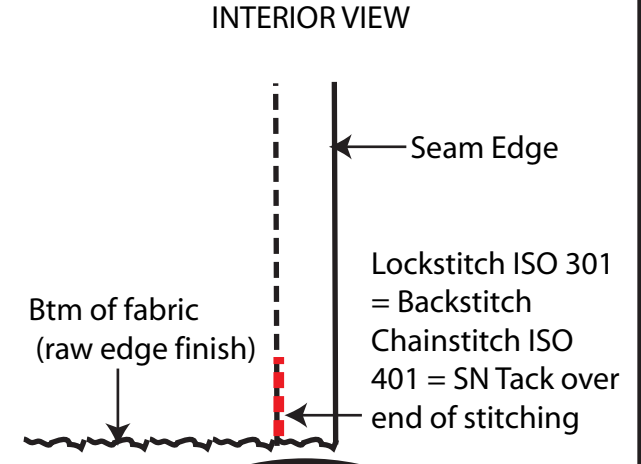
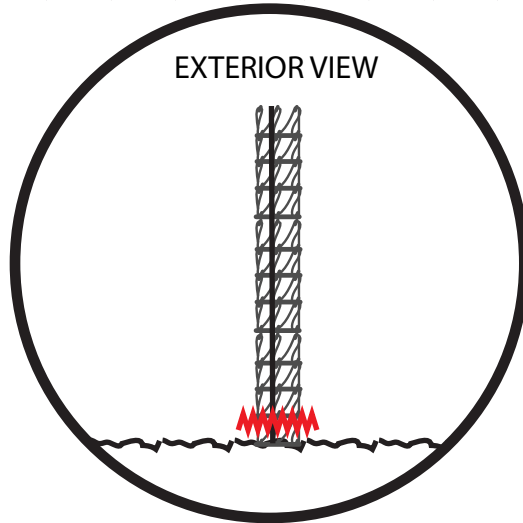
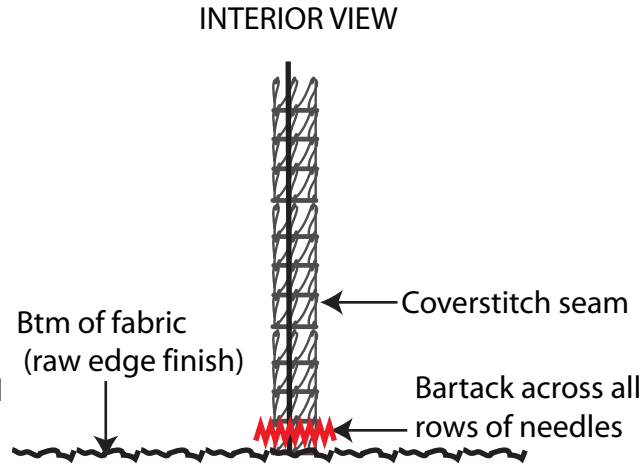
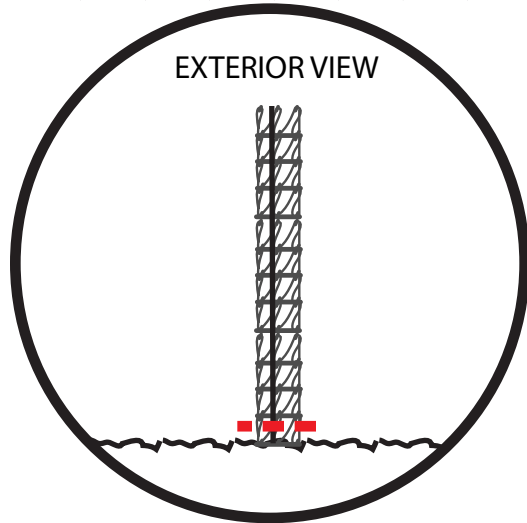
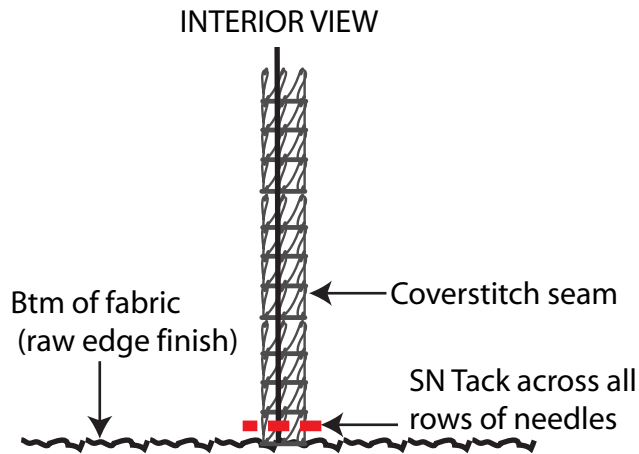
Coverstitch - ISO 406, 407, 602,

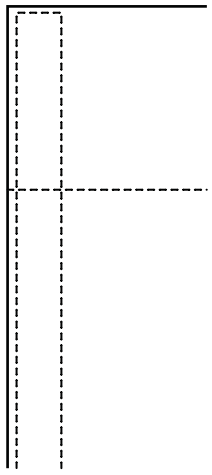
Lap Seam Coverstitch - ISO 605, 606, 607

Side/Underarm Seam Construction =

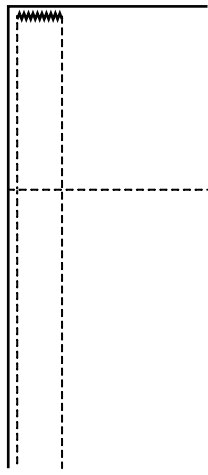
Lockstitch - ISO 301

Chainstitch - ISO 401





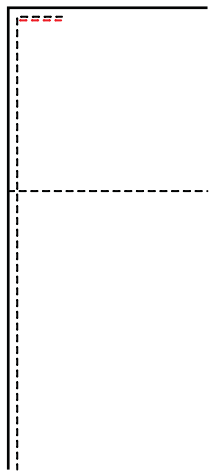
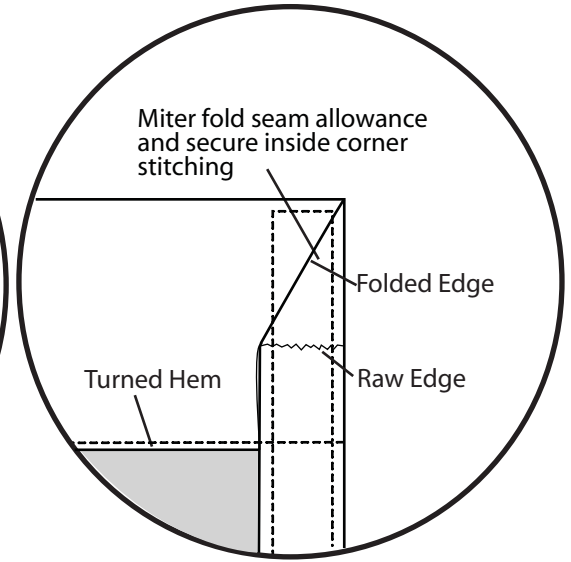
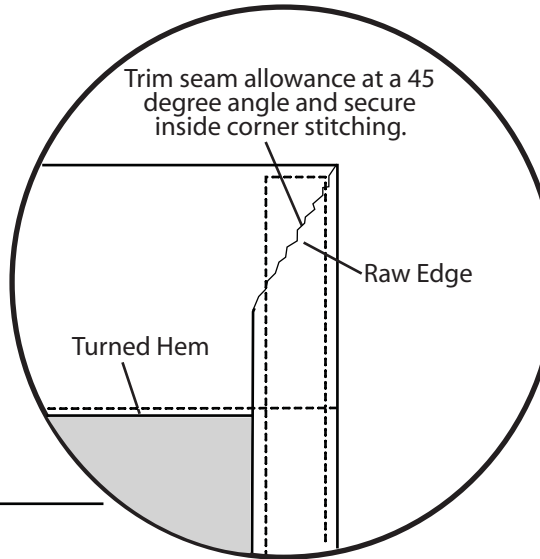
Double Needle Top-Stitch



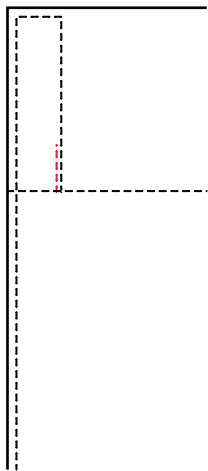
Double Needle with Bartacks



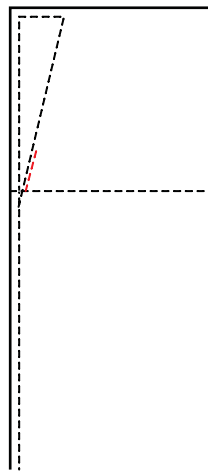
Inner corner pocket treatment - as specified by TD



L-Tack



Rectangular

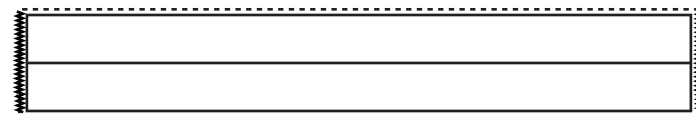


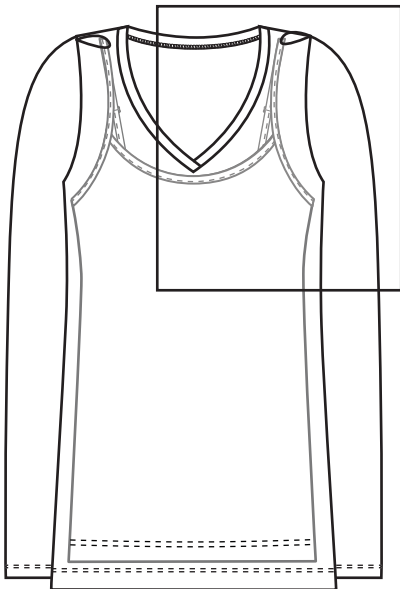
Triangular

Single Welt w/ SN/LS around perimeter & Line Tack at each end

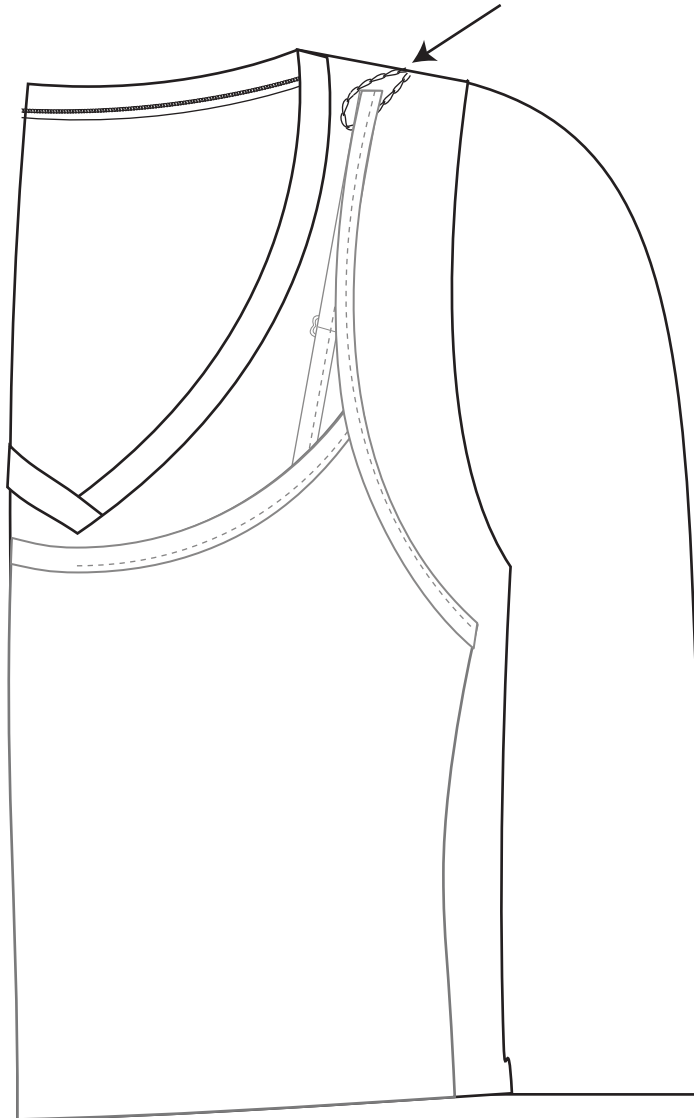


Double Welt w/ SN/LS and Bartacks at each end

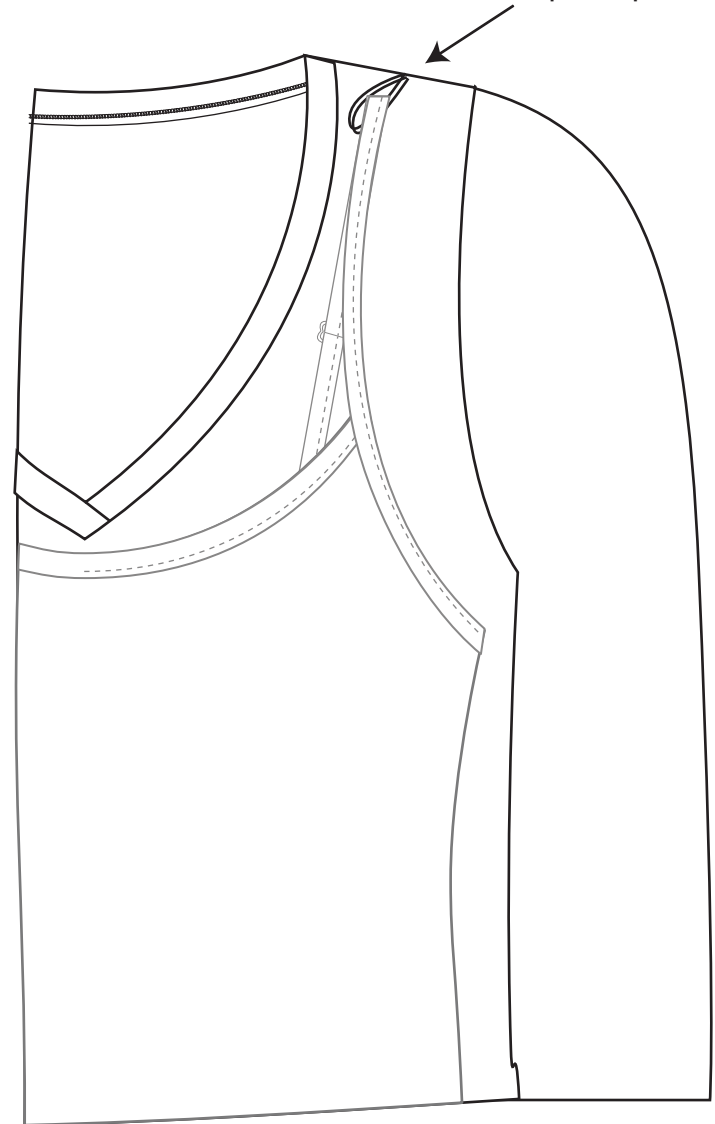




Thread Chain loop

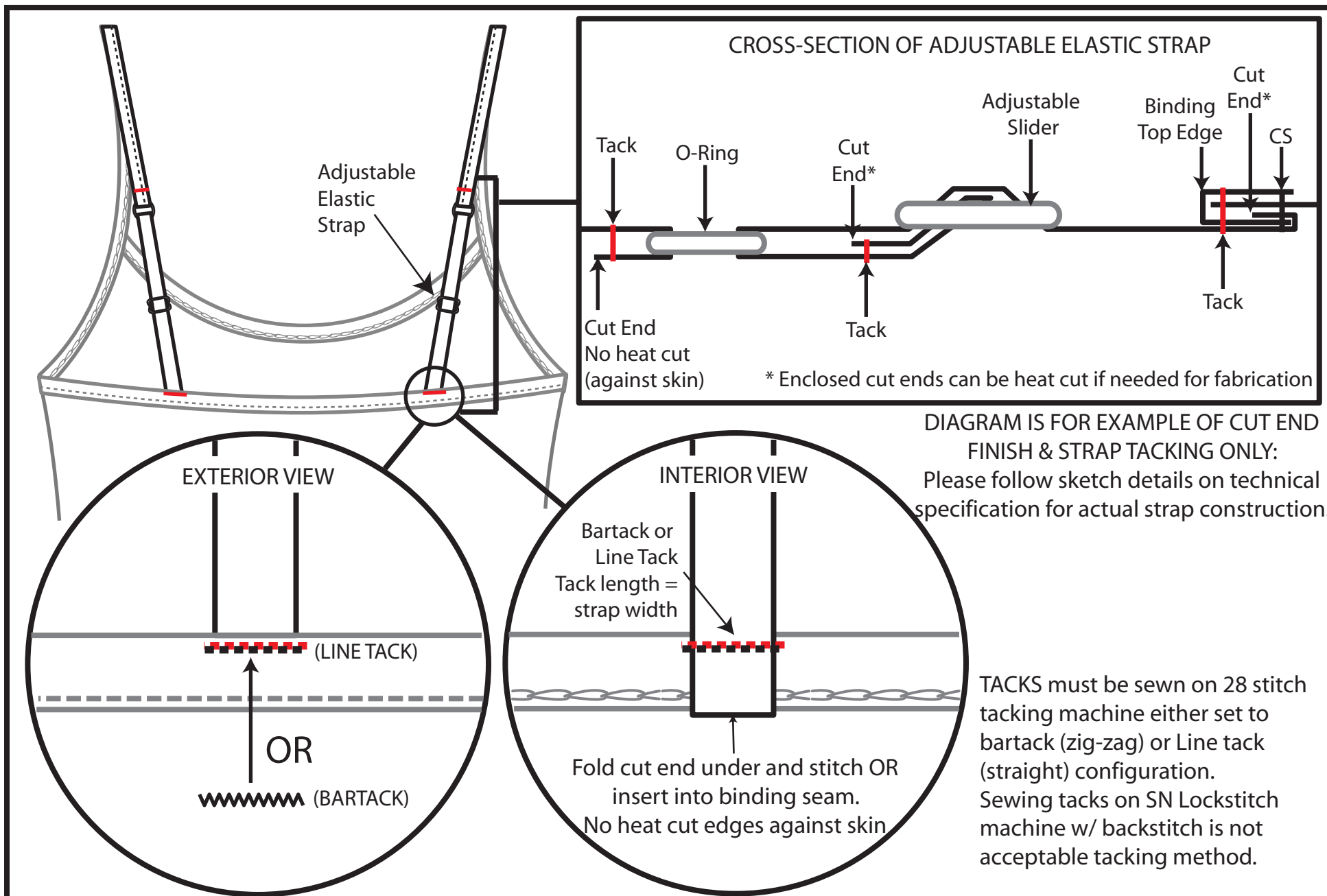


Clear stretch tape loop



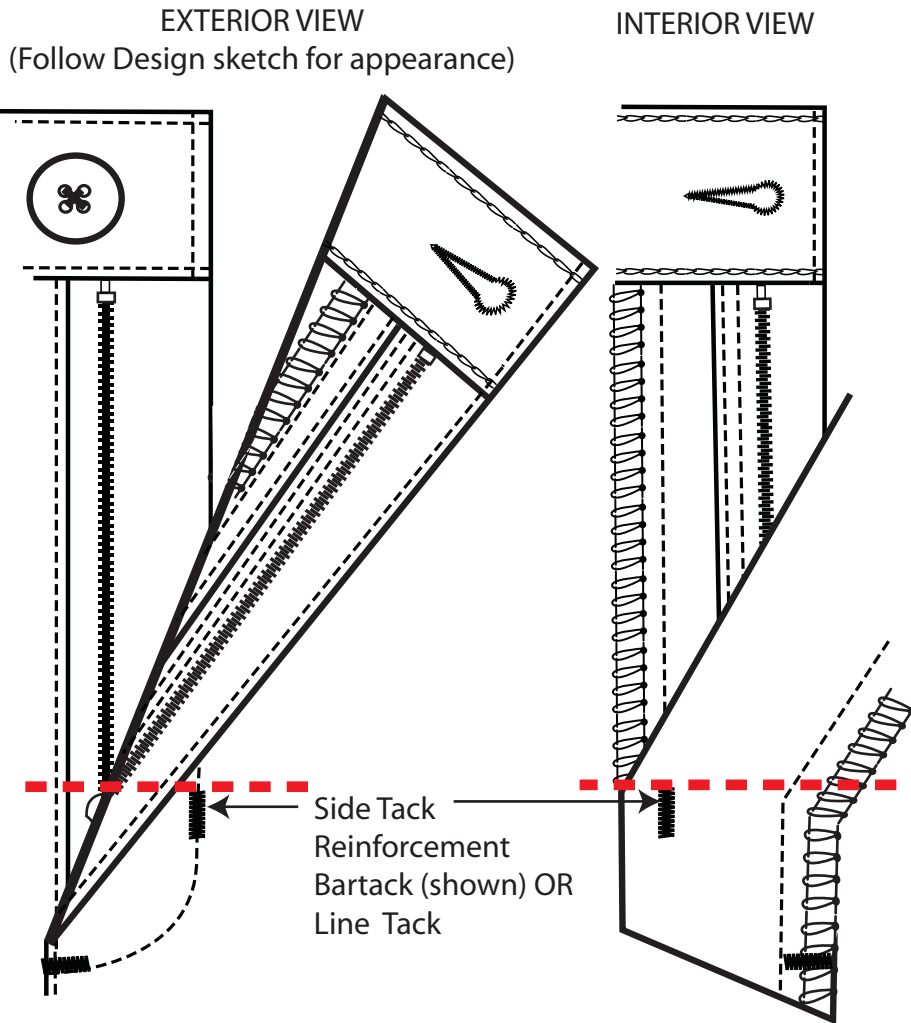
Two-fer styles with
camisoles:

Camisole is attached to
shell at shoulder seam
with thread loop or clear
stretch tape as specified
by TD.

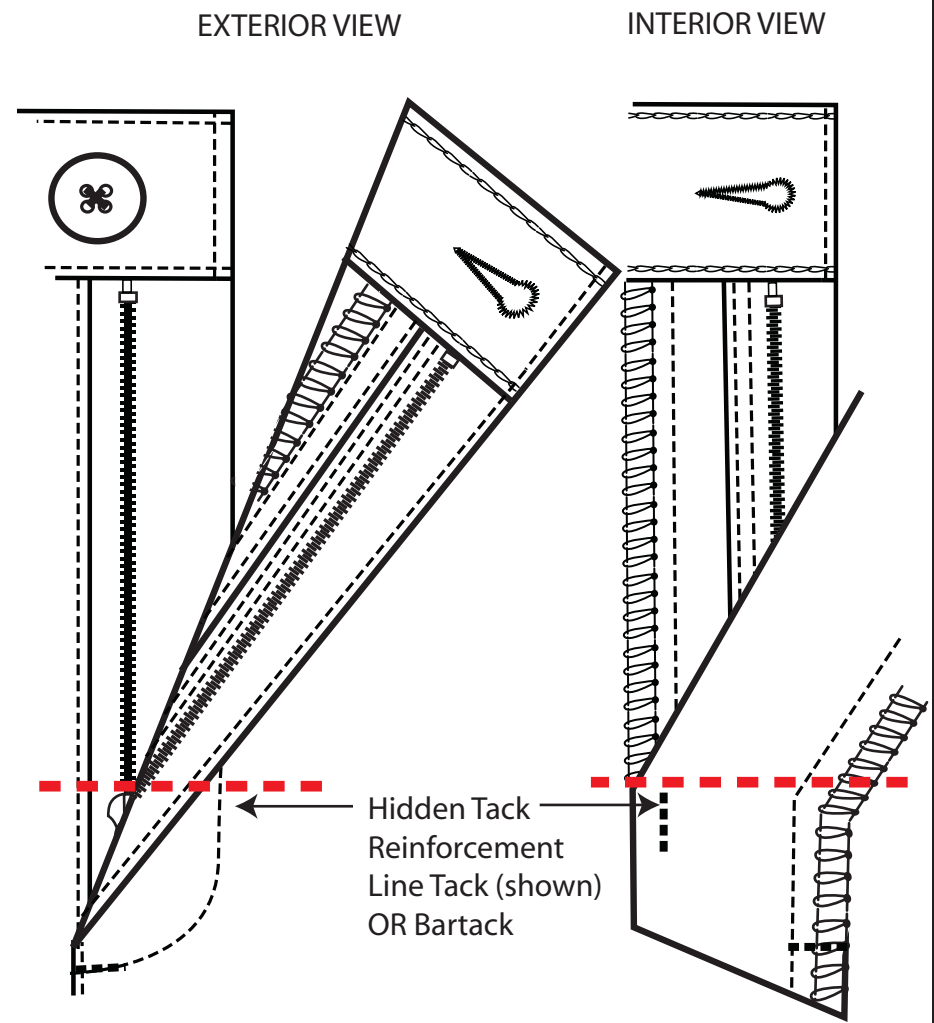


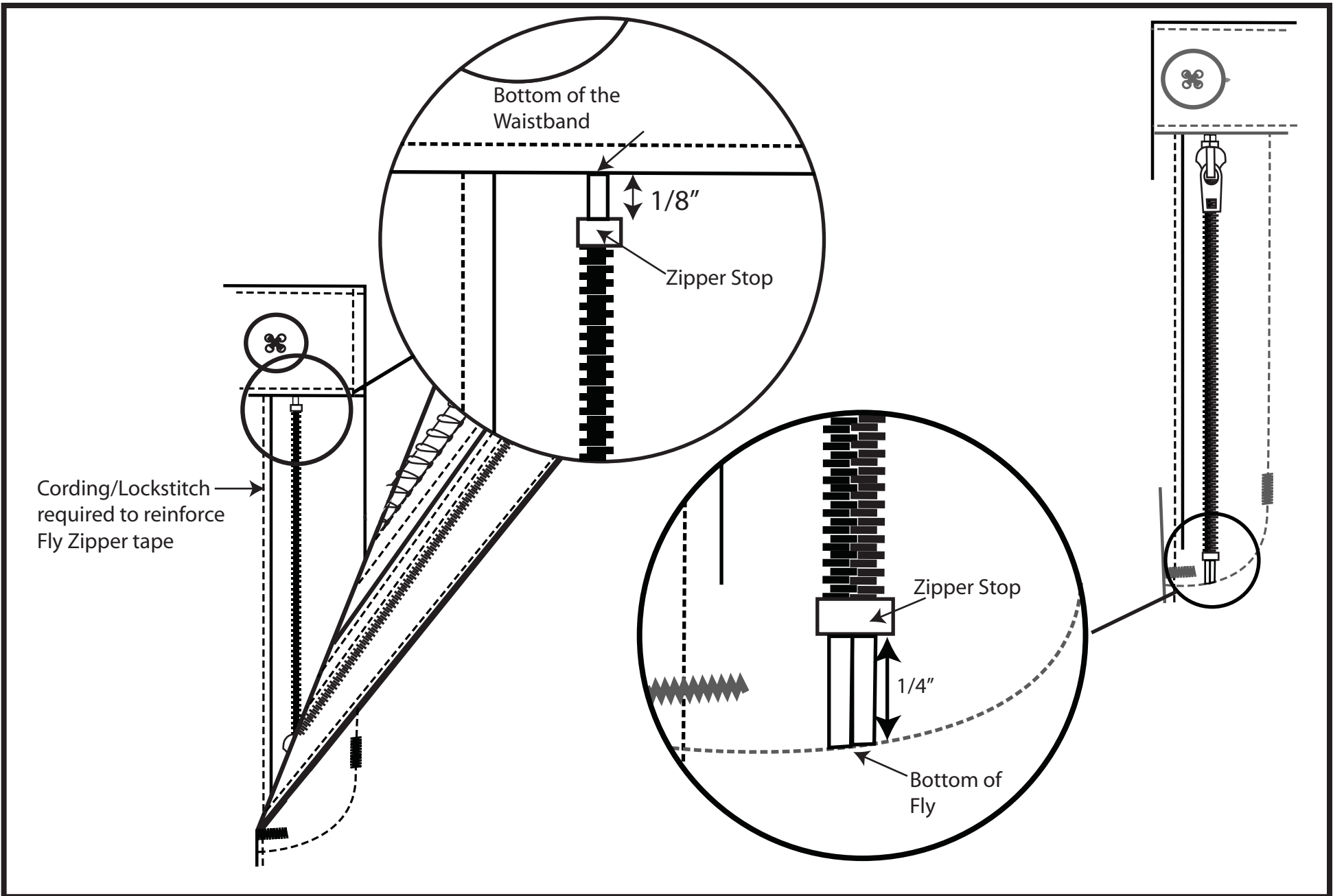
Diagrams are examples only - follow sketch in technical specification for actual fly appearance
 TACKS must be sewn on 28 stitch tacking machine either set to bartack (zig-zag) or Line tack (straight) configuration.
 Sewing tacks on SN Lockstitch machine w/ backstitch is not acceptable tacking method.

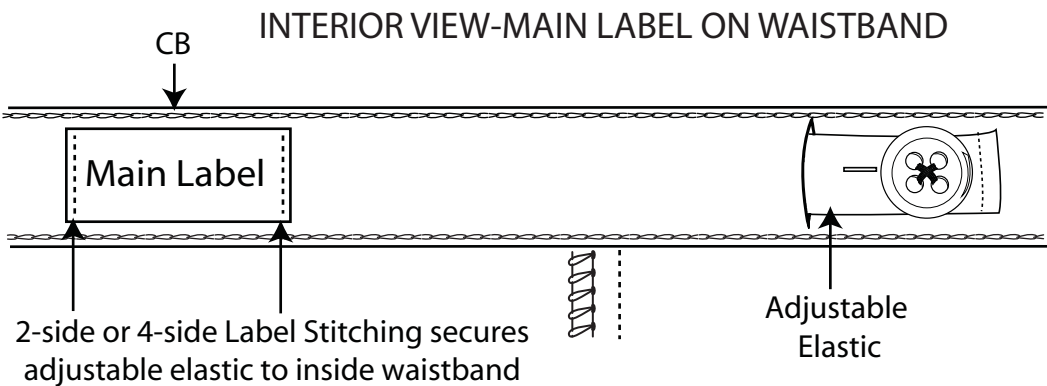
EXTERIOR REINFORCEMENT



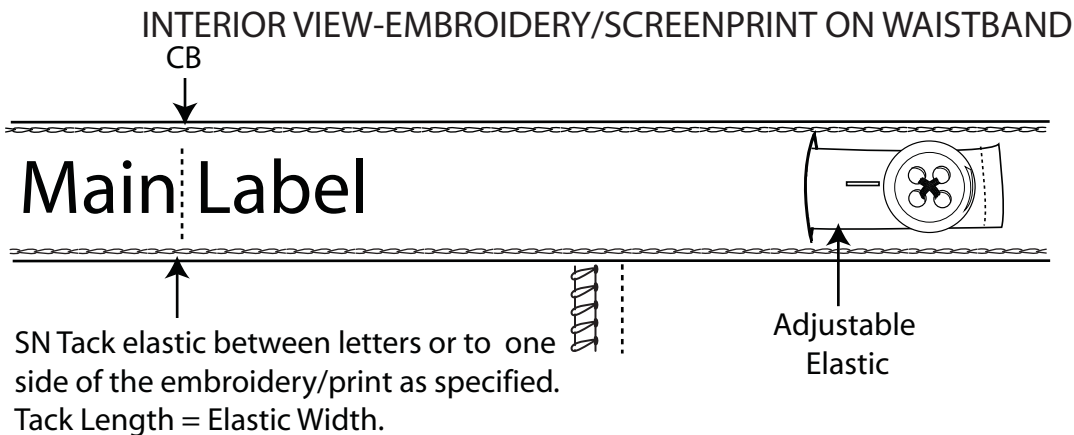
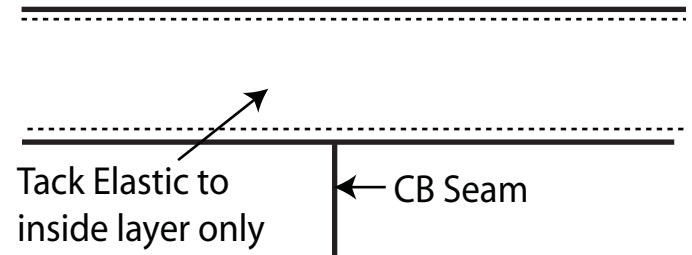
INTERIOR REINFORCEMENT



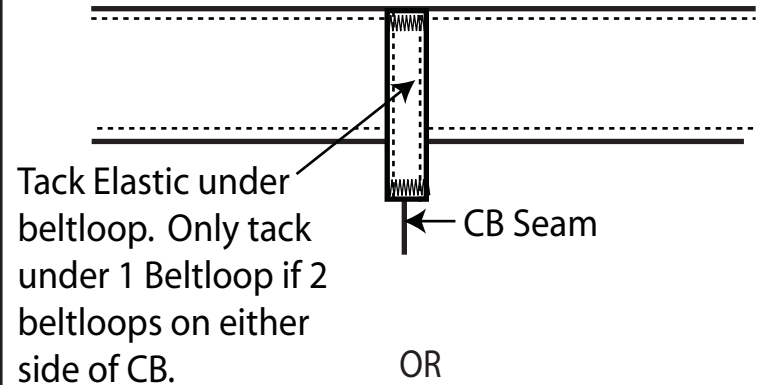




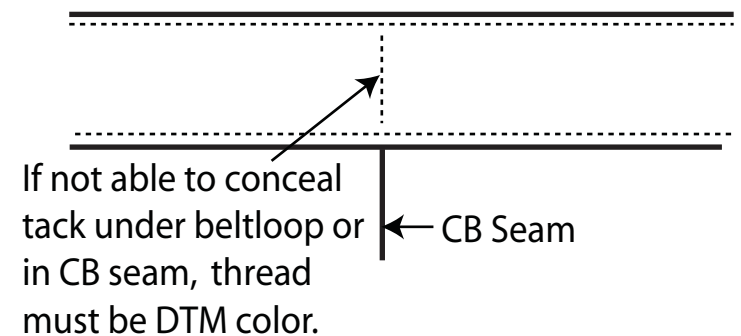
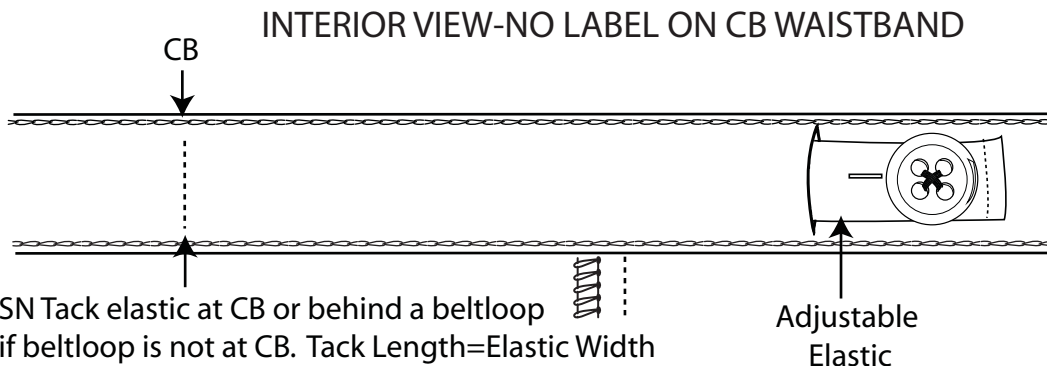
EXTERIOR VIEW - ELASTIC TACKED BEFORE WB FINISHED (Preferred)



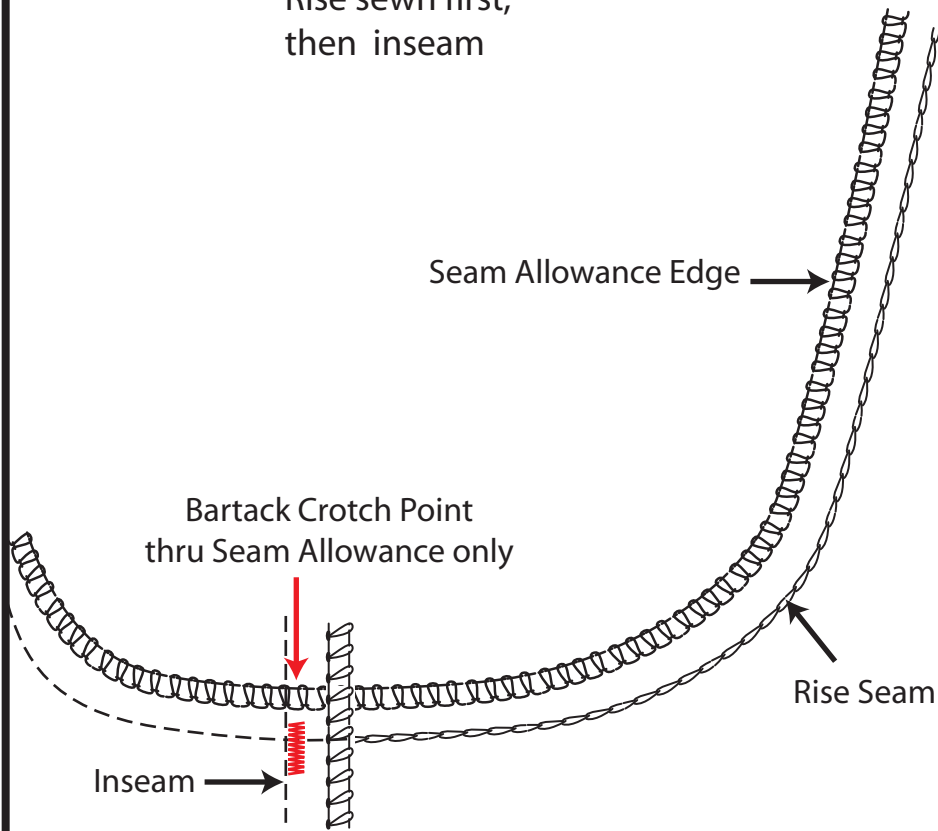
EXTERIOR VIEW - ELASTIC TACKED AFTER WB FINISHED



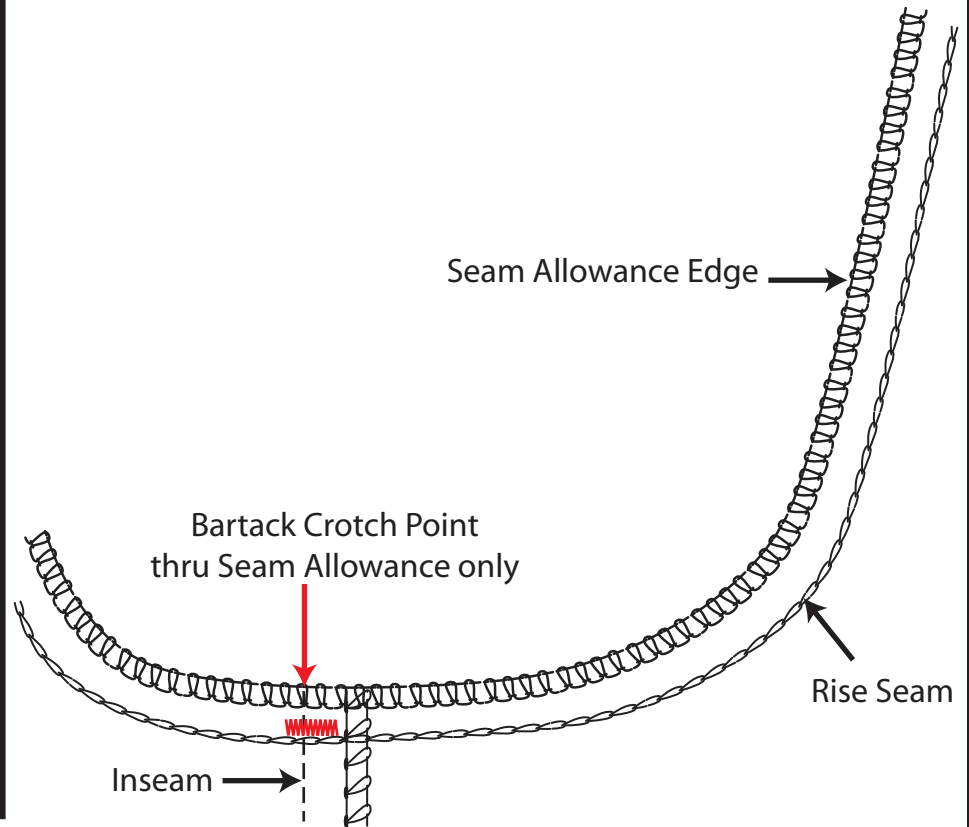
OR
(Subject to TD Approval)



INTERIOR VIEW
Rise sewn first,
then inseam

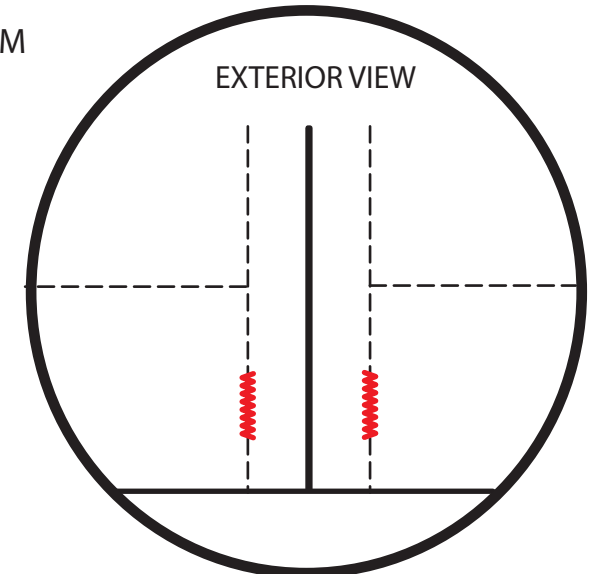
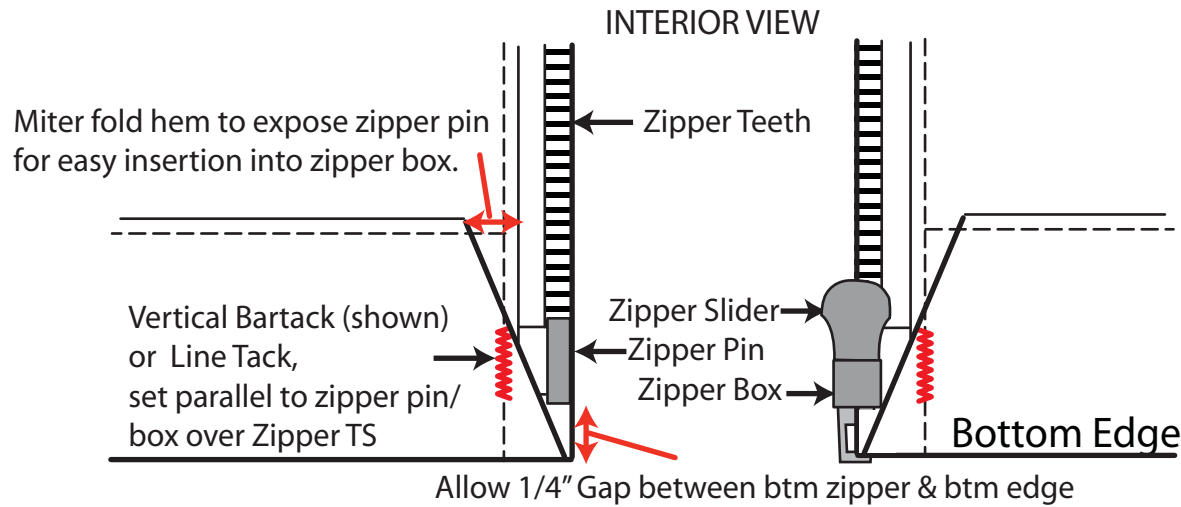


INTERIOR VIEW
Inseam sewn first,
then rise

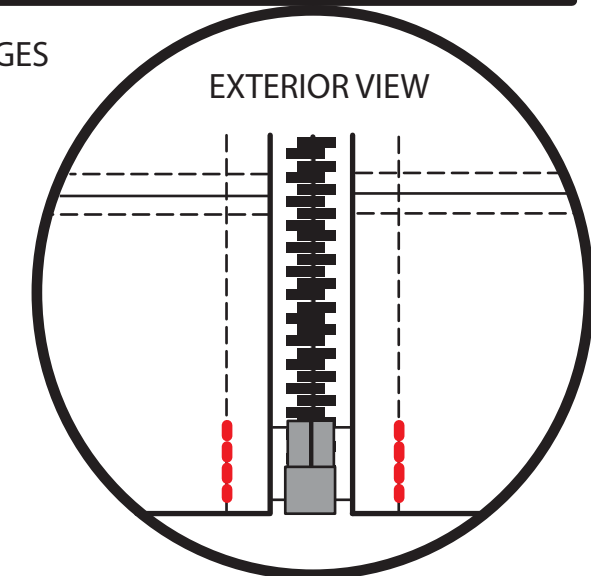
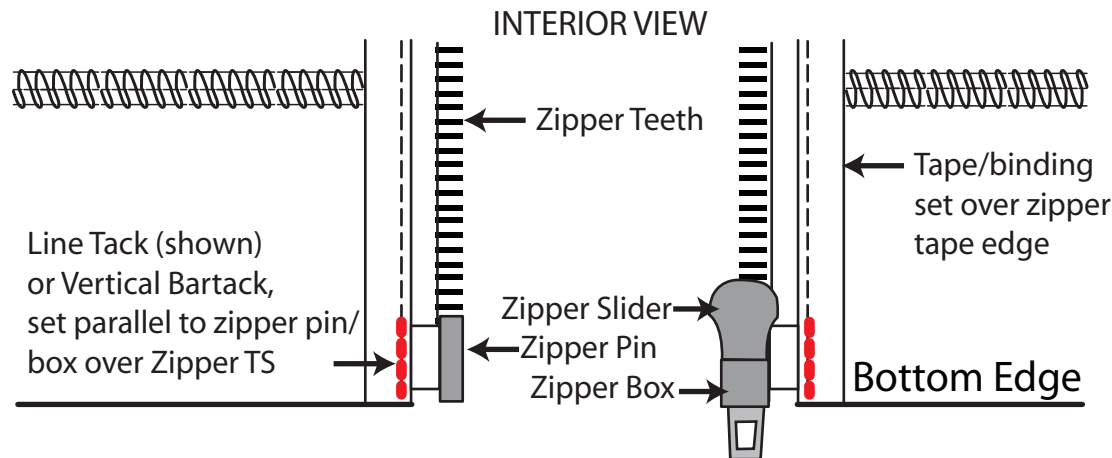


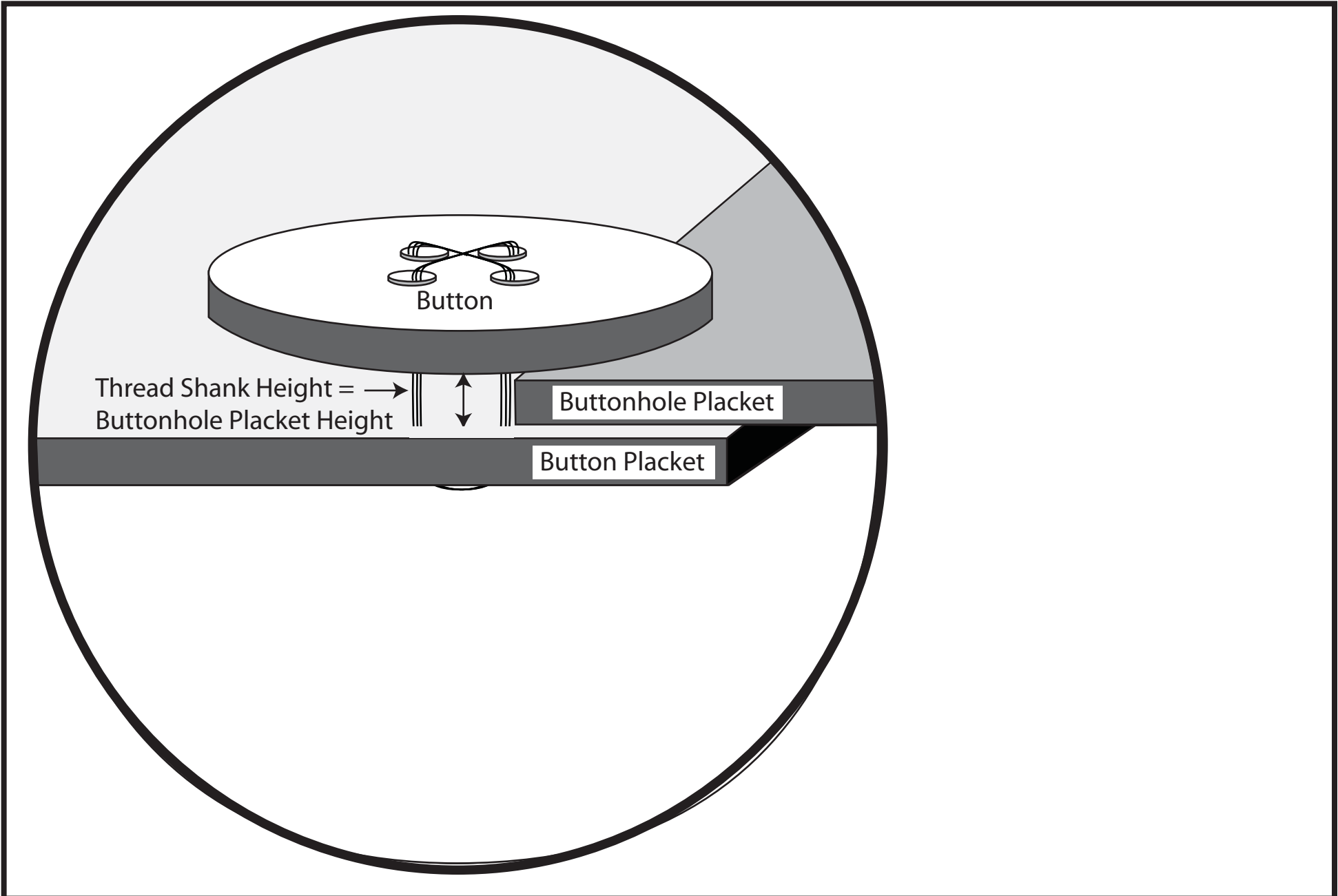
Diagrams are examples only - follow sketch in technical specification for actual zipper construction.
 TACKS must be sewn on 28 stitch tacking machine either set to bartack (zig-zag) or Line tack (straight) configuration.
 Sewing tacks on SN Lockstitch machine w/ backstitch is not acceptable tacking method.

EXAMPLE - COVERED SEPARATING ZIPPER W/ FOLD OVER HEM

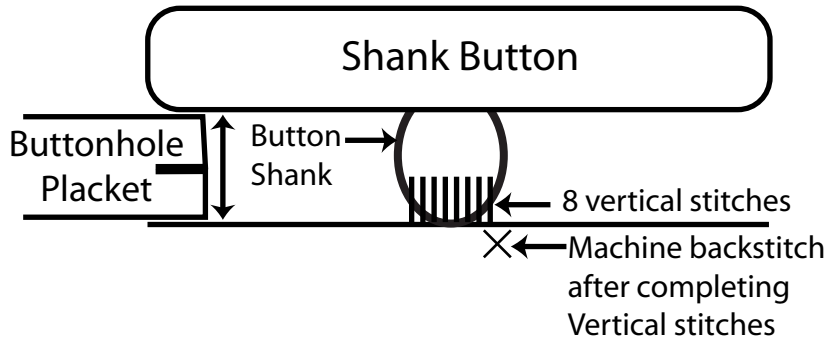


EXAMPLE - EXPOSED SEPARATING ZIPPER W/ TAPED EDGES

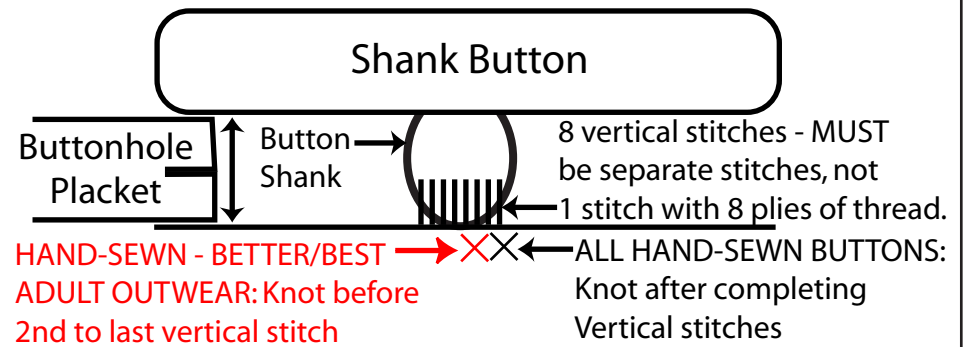




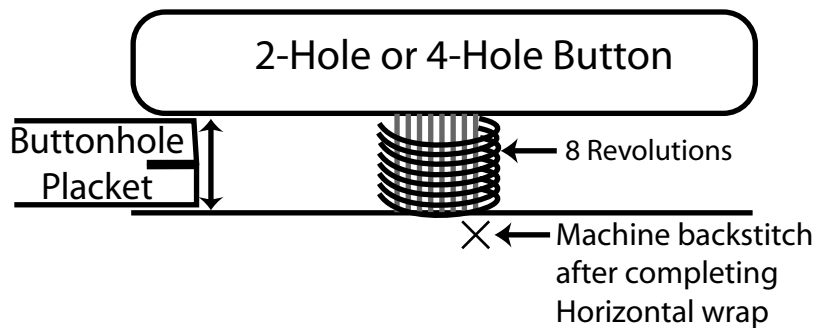
MACHINE-SEWN SHANK BUTTON ATTACHMENT



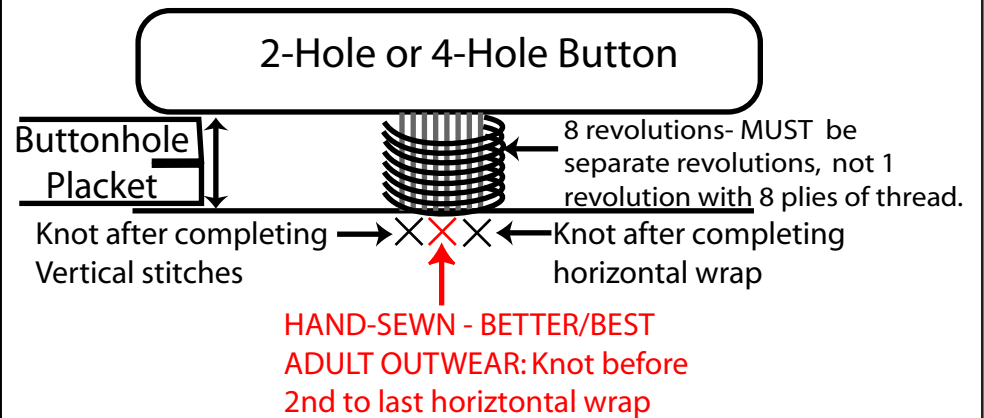
HAND-SEWN SHANK BUTTON ATTACHMENT



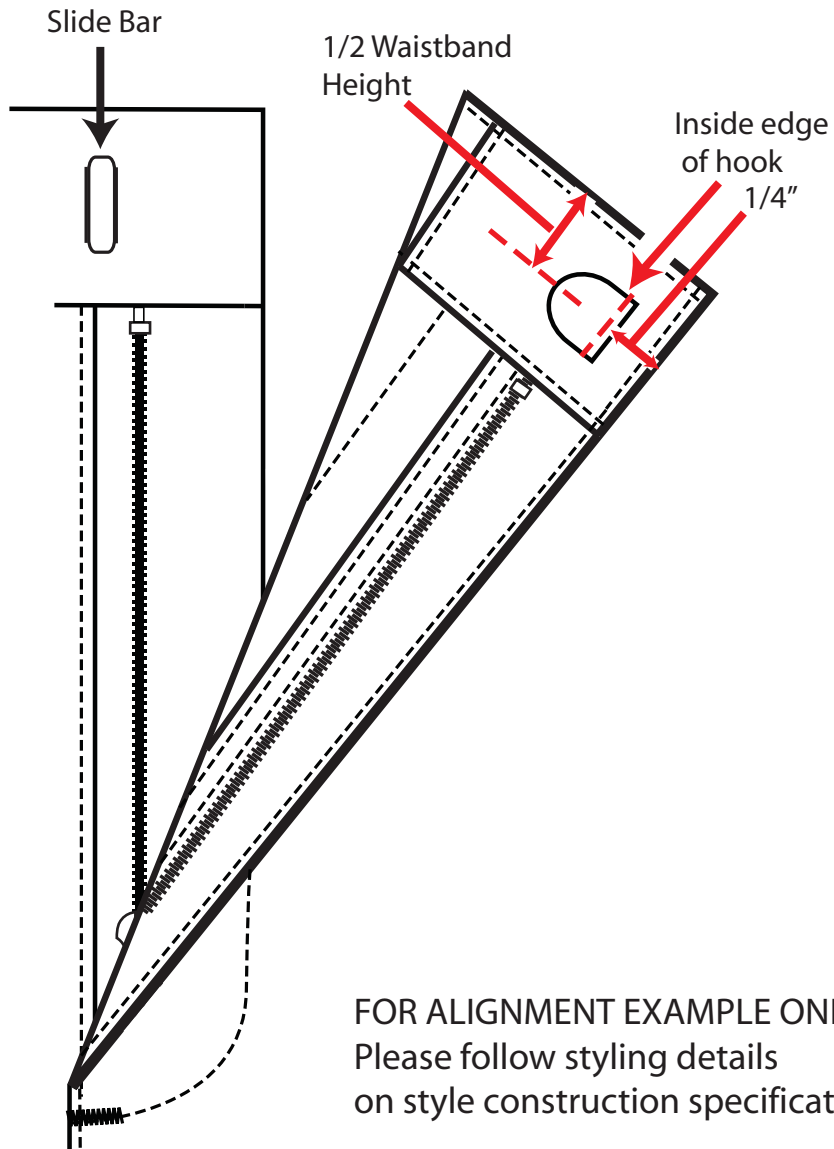
MACHINE-SEWN THREAD WRAP SHANK



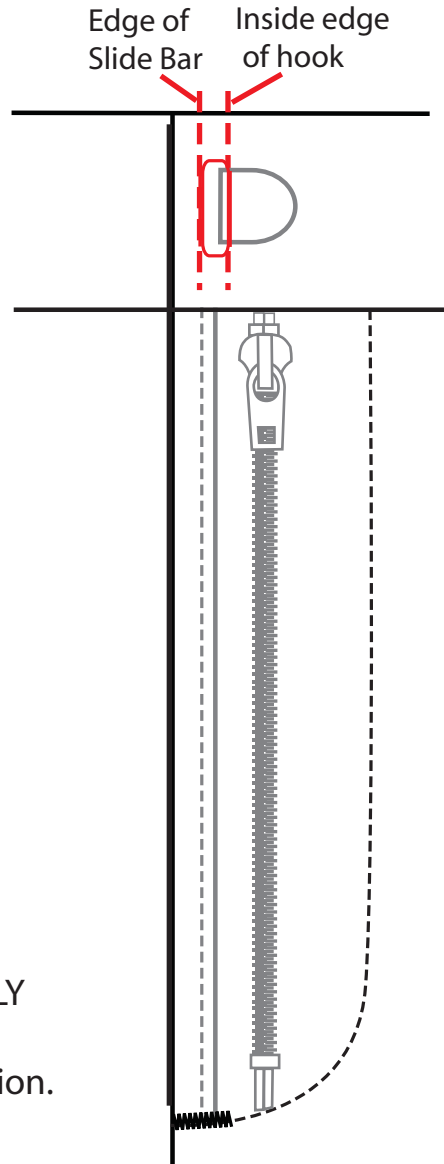
HAND-SEWN BUTTON/THREAD WRAP SHANK



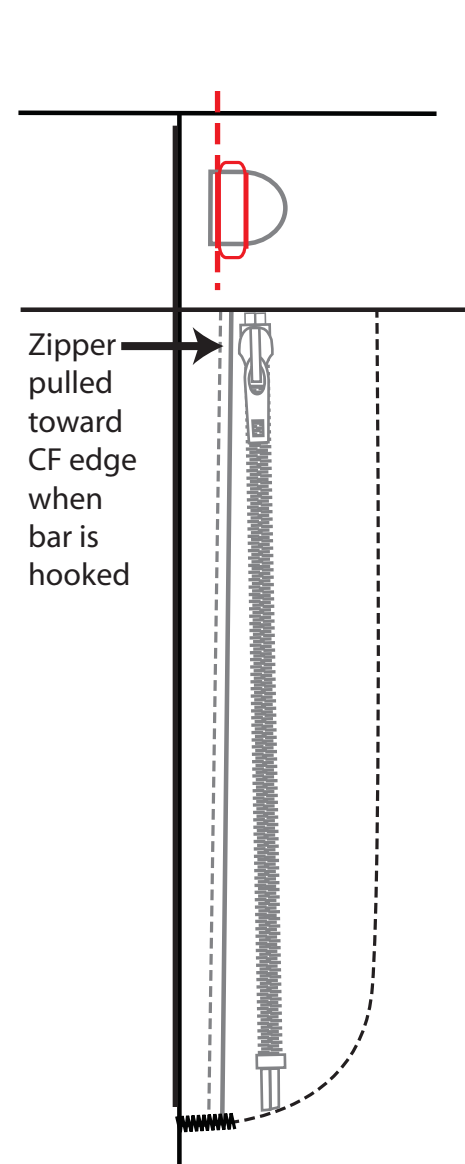
FLY UNZIPPED



FLY ZIPPED CLOSED,
HOOK & SLIDE BAR UNHOOKED

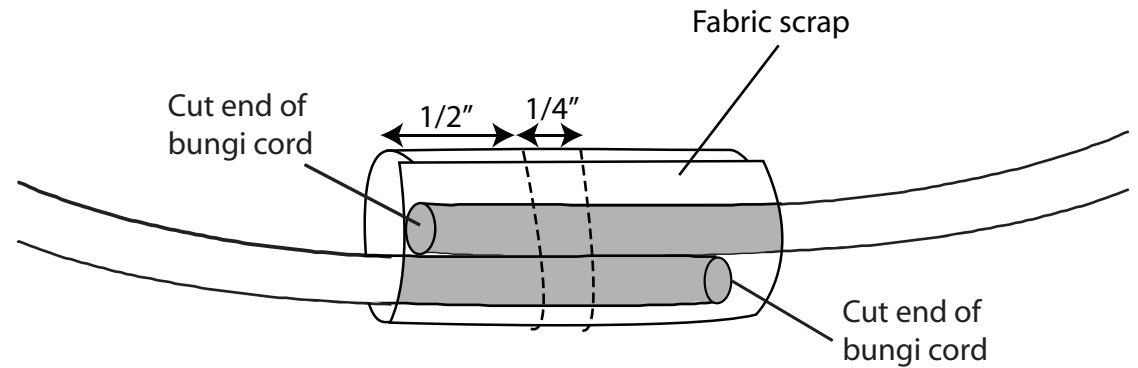


FLY ZIPPED CLOSED,
HOOK & SLIDE BAR HOOKED



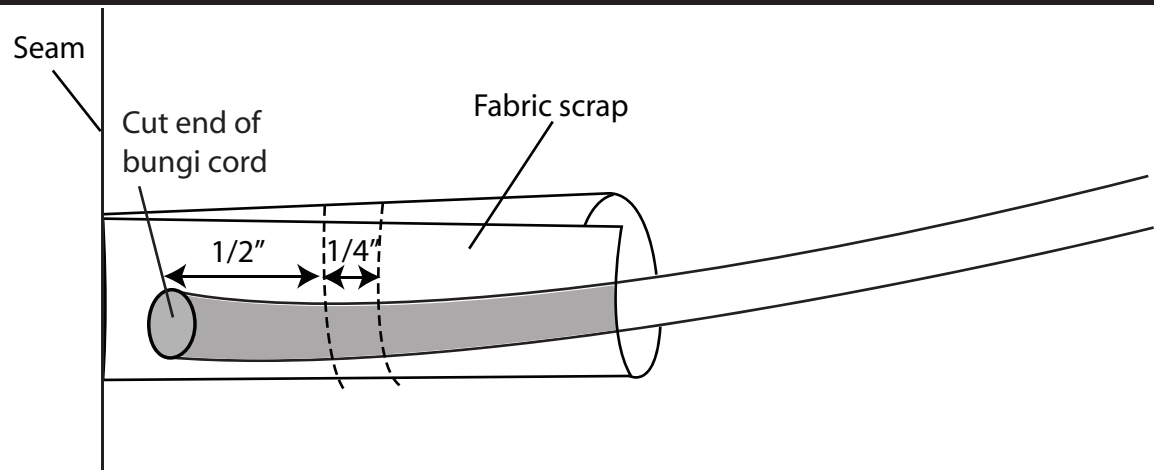
Circular Tack:

- Overlap bungi ends 1 1/4"
- Wrap ends of bungi cord with fabric
- Tack fabric to bungi cord
- (2) tacks 1/4" apart and at least 1/2" from cut end of bungi cord



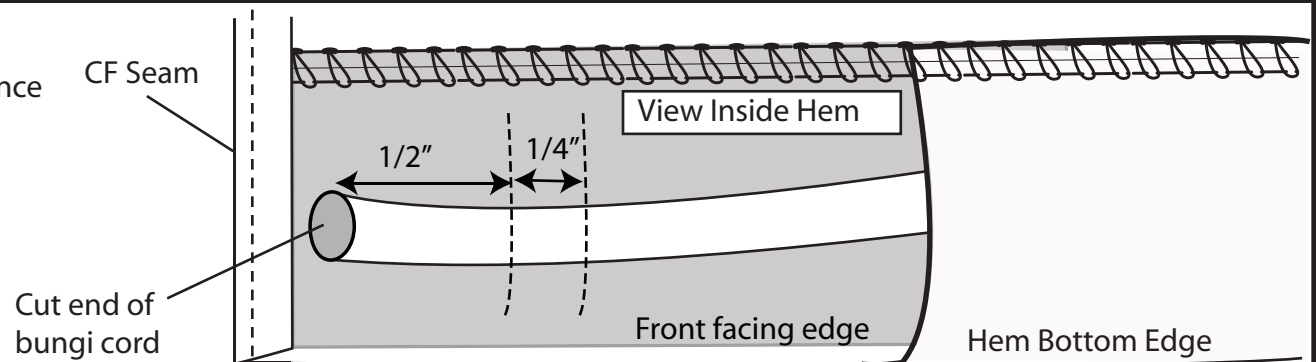
Non-Circular Tack:

- Wrap ends of bungi cord with fabric
- Tack fabric to bungi cord
- (2) tacks 1/4" apart and at least 1/2" from cut end of bungi cord
- Sew fabric end into seam



Non-Circular Tack to Facing:

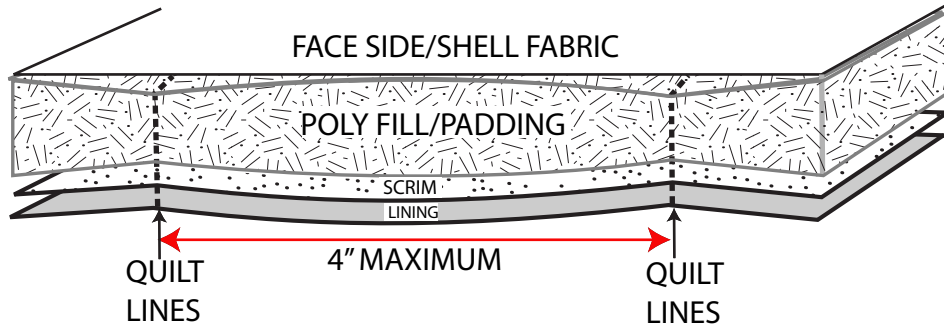
- Tack bungi cord to front facing/seam allowance
- (2) tacks 1/4" apart and at least 1/2" from cut end of bungi cord



**CROSS-SECTION OF:
SCRIM APPLIED TO PREVENT PADDING FIBER PERCOLATION
THROUGH LINING FABRIC**

STYLING APPLICATION:

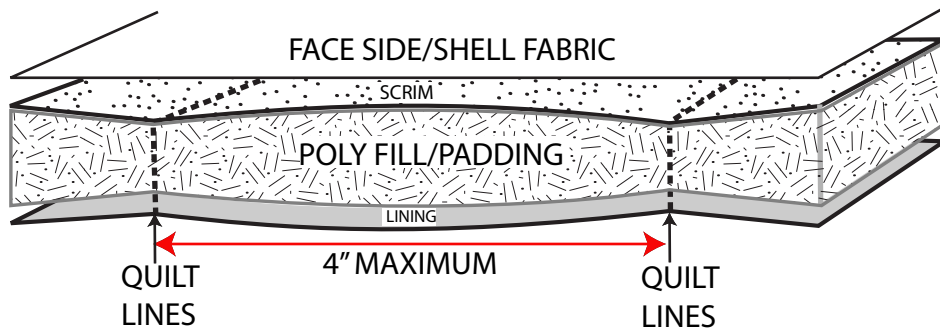
- Woven nylon/polyester Linings < 190T Thread count
- Fleece, knit, or cotton linings w/ low thread count
- Note if Shell fabric is also low thread count and is also non-coated, may also need to apply scrim layer between padding and shell fabric.
- Needle punch, bonded, or hot plate surface finish padding may be exempt from scrim if mock-up passes 3 launderings with out fibers entangling or percolating through shell or lining.



**CROSS-SECTION OF:
SCRIM APPLIED TO PREVENT PADDING FIBER MIGRATION**

STYLING APPLICATION:

- Garment Washed/Tumbled outerwear
- Light weight/unstable polyfill
- Needle punch, bonded, or hot plate surface finish padding may be exempt from scrim if mock-up passes 3 launderings with out fibers clumping/shredding.



**CROSS-SECTION OF:
SCRIM APPLIED TO PREVENT PADDING FIBER MIGRATION**

STYLING APPLICATION:

- Garment with Non-quilted or Free hanging shell/lining
- Provide stability to polyfill so that it stays in place inside of garment.

