

Birth of a Bustier

Copyright 2004
Kenneth D. King

All Rights Reserved.

Duplication for purposes other than intended are prohibited.

Intended purposes are those of reproduction of one copy by the owner of this CD for their own personal use and study. Any duplication for resale to a third party or to avoid purchasing another CD is not allowed. It is bad karma, or a violation of the Eighth Commandment (you know, "Thou Shalt Not Steal") or however you define your ethical background. Neither is duplication to avoid buying this CD for any instructional purposes where the teacher (if that teacher isn't me) is getting paid.

I know this sounds picky, but when ideas are one's stock-in-trade, this needs to be said. So, I am assuming that if you buy this you are scrupulously honest and ethical and will do the right thing.

Thank you!

Kenneth

A special thank you to Kathy Judd, Anne Fukano, and Shireen Irvine Perry for kindly proofreading this book!

TABLE OF CONTENTS:

Introduction:-----Page 3

Patternwork: -----Page 6

Materials: -----Page 43

Resources list:-----Page 54

Construction: -----Page 55

Special Cases:

Enhancing a bust:-----Page 81

High-waisted trousers and skirts:-----Page 89

Net Bustier Construction:

Also known as the corselet -----Page 100

Appendix:

An alternate boning configuration-----Page 139

INTRODUCTION:

This book started with a comment from one of my customers.

She said, after trying on one of my Mermaid dresses, "I feel like I could play volleyball in this!"

And that, as you may know if you've ever worn a strapless garment, is MOST important.

There are two concerns when wearing a strapless garment (no joke intended!)—one doesn't want to be tugging it up all night long, and one doesn't want to worry about spilling out of the top of the garment.

When wearing something strapless, you need to go forth like a schooner in full sail, head high and shoulders back, confident in your beauty. If you feel like you are going to lose the dress, you will look uncomfortable at the very least, and very exposed at worst. You will wear this garment exactly ONCE! Then it will lurk in your closet, unloved and unworn.





Many people think that a strapless garment is supported by the bust. Quite a few times, I've heard the comment, "I have too little (or too much) bust to wear strapless. This is a common misconception. Any bust size can wear a strapless garment, if it fits properly and is constructed soundly. (In my kind of construction, if you want a fuller bust, you can achieve that as well without anyone seeing your "cheaters".)

Where most garments hang from the shoulders, the strapless garment sits on, and is supported by, the waist. Also, strapless garments have to counteract gravity in order to stay in position. The methods in this book are based on these concepts.

Perhaps I should differentiate between strapless garments (or bustiers as they are called when they stop at the waist) and corsets. A strapless garment can look like a corset. But, whereas a corset imposes its shape onto the figure to change the figure, a strapless garment (for the most part) derives its shape FROM the figure. The figure is the starting point when making a strapless garment.

This book will cover how I make strapless garments. It is a continuation and expansion of a Threads Magazine article I did in the mid-90's. We will start with the most important thing—proper fit and pattern modifications. From here I will show the types of materials I use for constructing strapless garments, followed by the construction steps.

I use this idea of construction also when constructing a high-waisted faced skirt—this type of skirt may not cover the bust, but needs reinforcement to stay in the proper position, just like a bustier.

Afterwards, I will cover what I call a “net” bustier, which I use for garments that are not tightly fitted. This construction is based on what I have observed in ballet costuming, and functions as the top facing of the garment.

So, fear not, for you too can make strapless garments that stay put!



PATTERN WORK:

I recently read an article in a magazine about making a strapless garment. It started with something like this:

“Begin with a well-fitting strapless pattern.”

Sage advice. But as we all know, a well-fitting pattern is very hard to come by. We’ll make that well-fitting pattern in this chapter.

If you are reading this, you no doubt have the insight that the well-fitting pattern is the foundation of a good strapless garment. As commercial patterns don’t fit all figures, I like to start with the Moulage. For those not familiar with the Moulage, it is the foundation of the pattern drafting system I learned from my teacher, who was trained in Paris at the Ecole de Guerre-Lavigne in the 1960’s. The Moulage is a tight-fitting draft, with no wearing ease, and extends from the neck to the full-hip (about 10 inches, or 25cm, from the waist).

In the illustrations that follow, I will be using the Moulage illustrations, and its lettering, that I used in my CD “The Moulage”. If you have your Moulage drafted, you are ahead of the game here. So, if you don’t have a moulage, prepare one now!

Some notes on the illustrations:

I draft seam lines, and then add the seam allowances by using a dual tracing wheel and carbon paper to transfer the seam- and cutting lines onto the fabric. So know that, the lines in the illustrations are SEAM lines, not cutting lines.

Also know that I have played a bit with proportion in some of the illustrations, to get a point across. So, if your pattern looks a bit different than the illustrations, don’t despair! You have a different figure!

Measuring for the strapless draft:

The phrase “no wearing ease” is the operative phrase here. When making a strapless garment, it has to fit your figure exactly. I’m assuming that you have your moulage already, so my instructions are based on that assumption.

When I measure for a strapless garment, I ask the subject to wear her evening style bra to the measuring, and also to the muslin fitting. You want the exact shape of the bust so you can take proper measurements, and fit to that. Later, you will build the garment so she doesn’t have to wear foundations, but to begin, you want the desired shape of the bust to get the line right.

Also, whenever possible, you want to measure and fit the subject in the shoe heel height she will be wearing with the garment. High heels change the tilt of the pelvis, which changes the tilt of the waist. You need to know this when establishing the actual waist.

This is Jennifer. She is the customer who remarked that she could play volleyball in my strapless dress. Isn’t she beautiful? This is the bustier I made for Jennifer.

Her bust placement, and heel height were determined at the outset, and the result is an outfit that fits her exactly.

I photographed this bustier all the way through the process, from cutting to completion, so you could get a sense of what an actual garment looks like as it is taking shape.



The actual waist (in this book) refers to the waist level, below where a waistband won't fall any lower. (For example, if you have a loose trouser, this is as low as it falls without falling off the waist).

I find the actual waist by first putting elastic around the waist. Then, I have the subject move around, bend at the waist, bend side to side, and then note where the elastic ends up. Where the elastic settles, I then use as the waist when measuring. (This also will be the waist on the Moulage that you will work from to develop the foundation pattern, discussed below.)

You will draft, and then make the Moulage up in muslin, and try it on the subject. (Make sure she's still wearing her preferred bra. Confiscate it if necessary so you will have it for fittings.)

After any adjusting you need to do to the moulage, draw the desired neckline/topline design directly on the muslin. There are two ways to do this—you can use chalk or "sharpie" marker if you're relatively confident. Or, for a movable line, go to the photo supply store and get their 1/4" (6mm) wide black photo masking tape. This makes a bold line, and you can re-position it until you get the most flattering effect.

Once you get the desired design line, you will later transfer it to the paper pattern with tracing wheel and tracing carbon.

PATTERN MAKING:

There are two layers I use when constructing the strapless garment. First is what I call the "foundation layer", and the second is called the "outer layer" (or "upper layer").

The foundation layer is the layer closest to the skin. This layer consists of lining fabric, with stiffeners and boning underneath. It will be responsible for fitting perfectly, as well as incorporating the understructure that will support the entire garment. It needs to be skin-tight, with no wearing ease.

After we develop the foundation layer, we will create the "outer layer". The outer layer is just along for the ride. It incorporates the fashion fabric, and an interlining underneath that gives weight and substance to the fashion fabric.

Some theory:

We need to cover some theory before beginning, so you will understand why we're doing what we're doing.

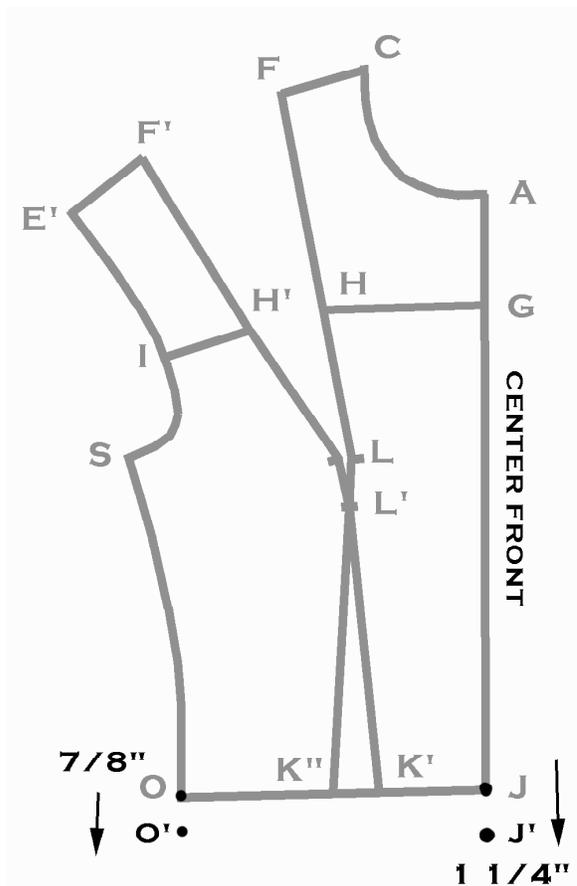
The strapless garment sits on the actual waist, which we determined before measuring. (Think of the actual waist as the foundation of a building.) There will be bones in this garment, and, in construction, they will anchor onto a ribbon waist stay at the actual waist level, such as upright columns in a building anchor to the foundation of the building.

Continuing the building analogy, there is the force of gravity, pulling down at the structure. Since the actual waist is soft (unlike the Earth's crust beneath a building), we will need to add length to the bodice, and raise the bust point, to counteract for the gravity that makes the garment want to compress down. By doing this, when the garment is worn, everything will sit in the position it is intended to.

Starting with the moulage, we will draft the foundation front, then continue to the back.

FOUNDATION LAYER FRONT:

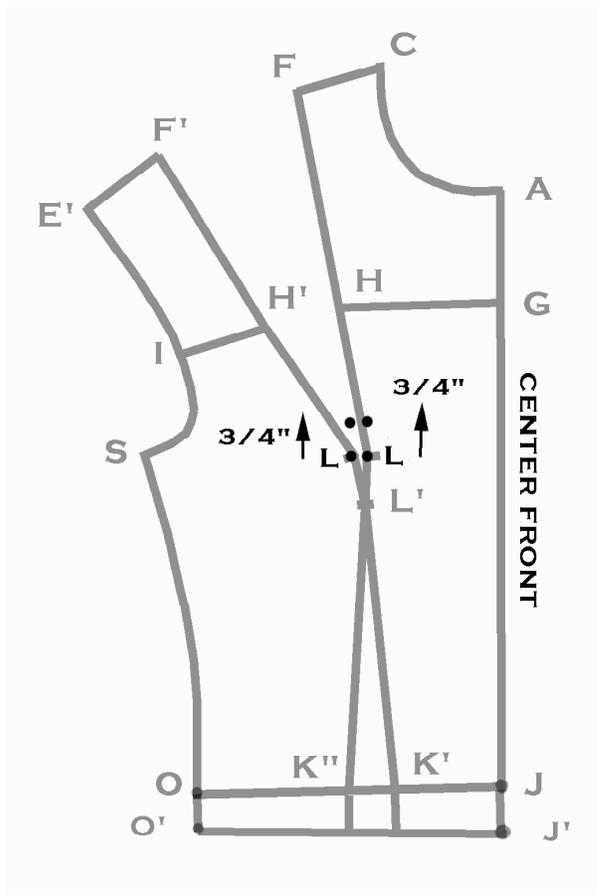
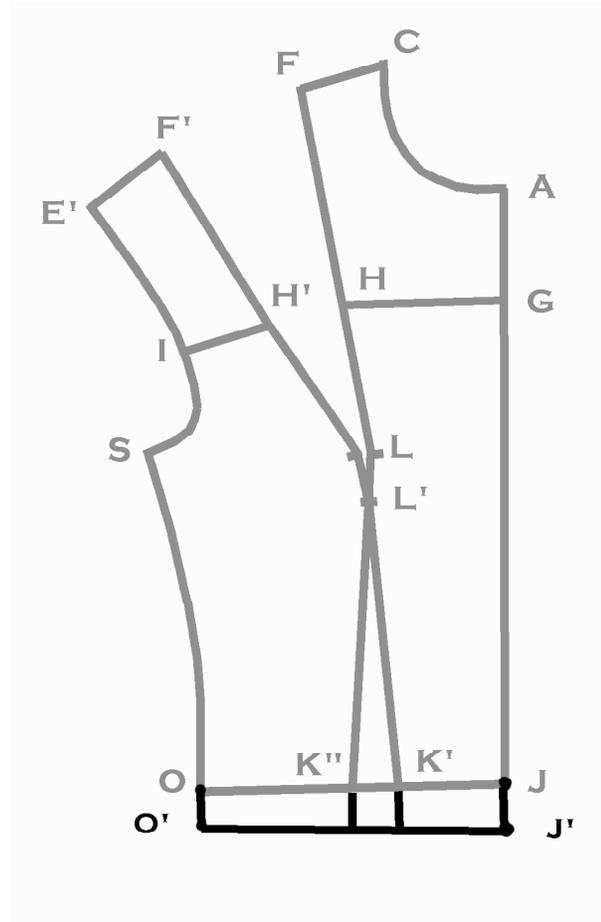
Start by lowering the waist at the center front, J to J', by 1 1/4 inches (3.2cm), and the side O to O' by 7/8 inches (2.2cm).



Draft lines down from J to J', and O to O', and re-draft the new waist.

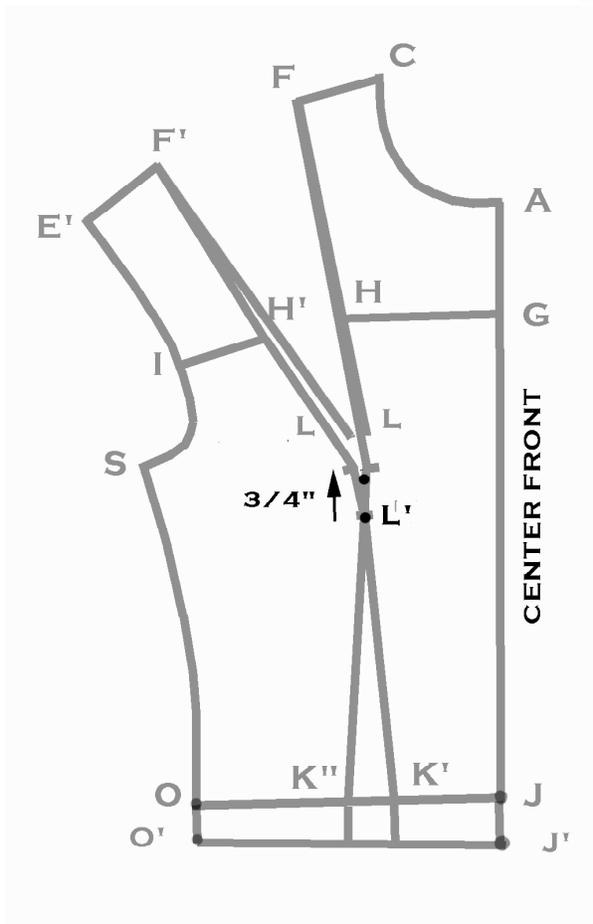
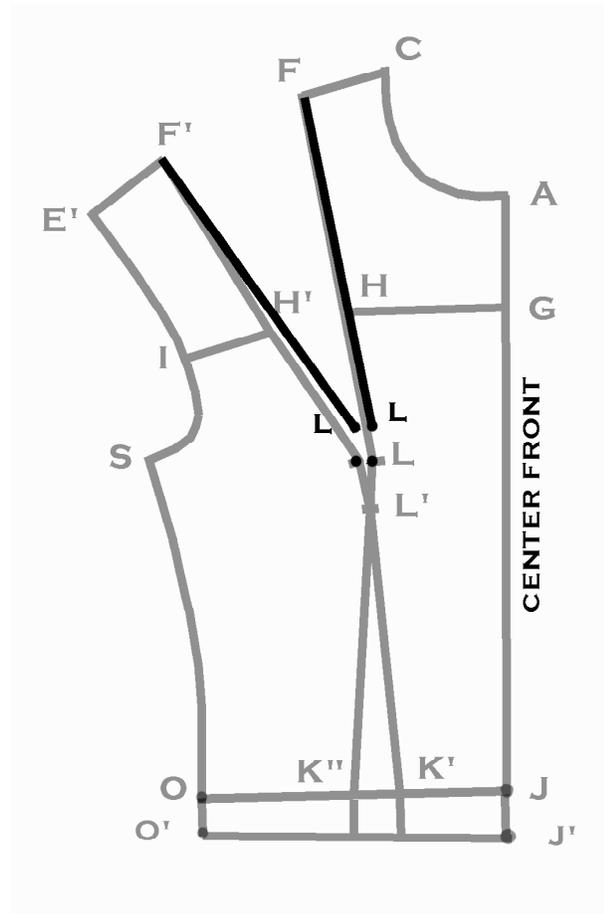
Extend the dart depth straight down to this new line, so the distance at the bottom of the extended dart equals the distance between K'' and K'.

If you just extended the dart legs straight, it would decrease the waist circumference.



Raise the bust points L, up parallel to the center front by 3/4 inch (1.8cm).

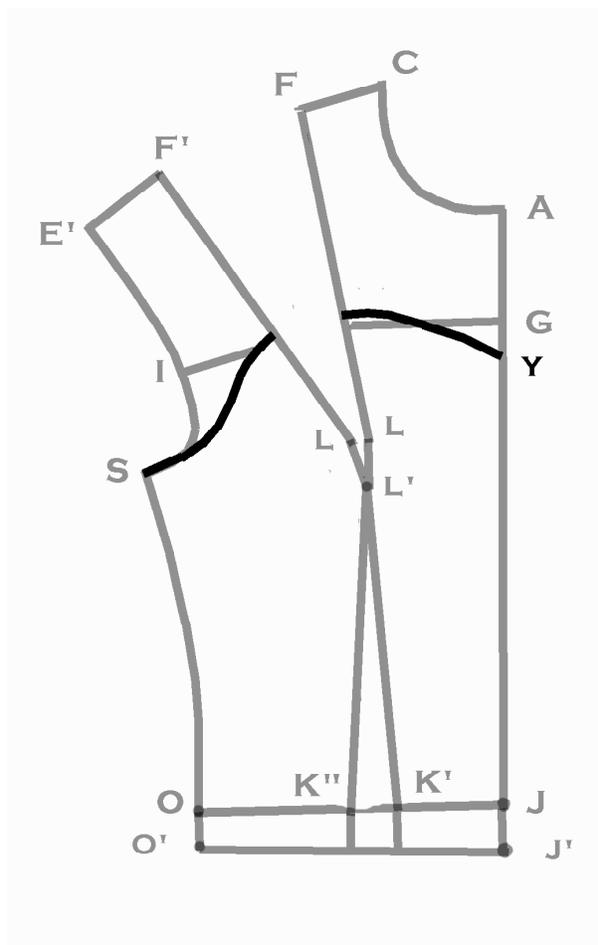
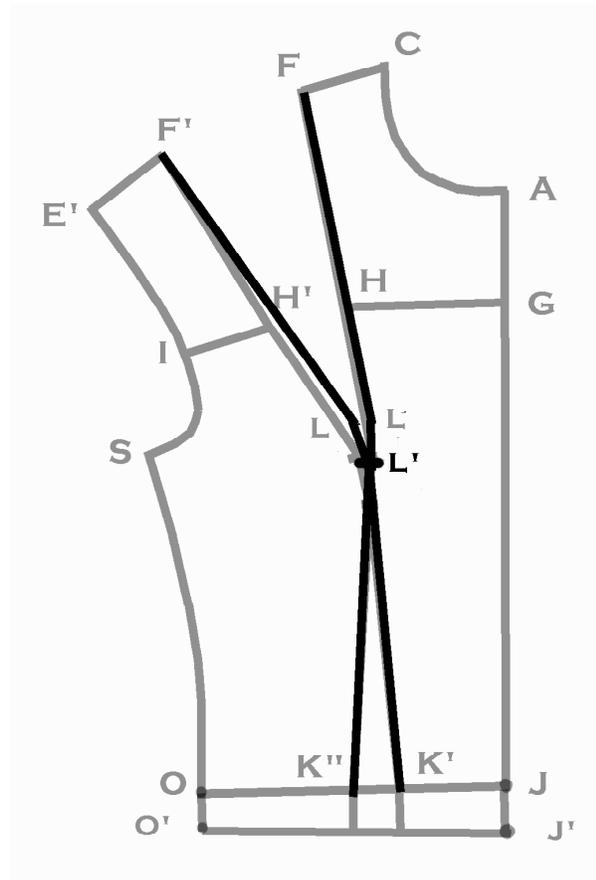
Re-draft the princess lines from the new L, to points F and F'.



Raise the top end of the waist dart L', up by 3/4 inch (1.8cm) as well.

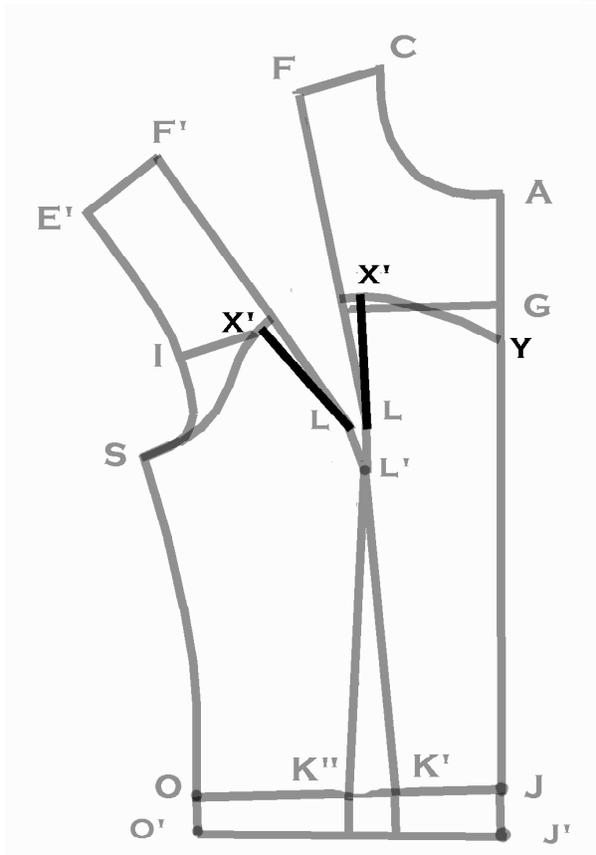
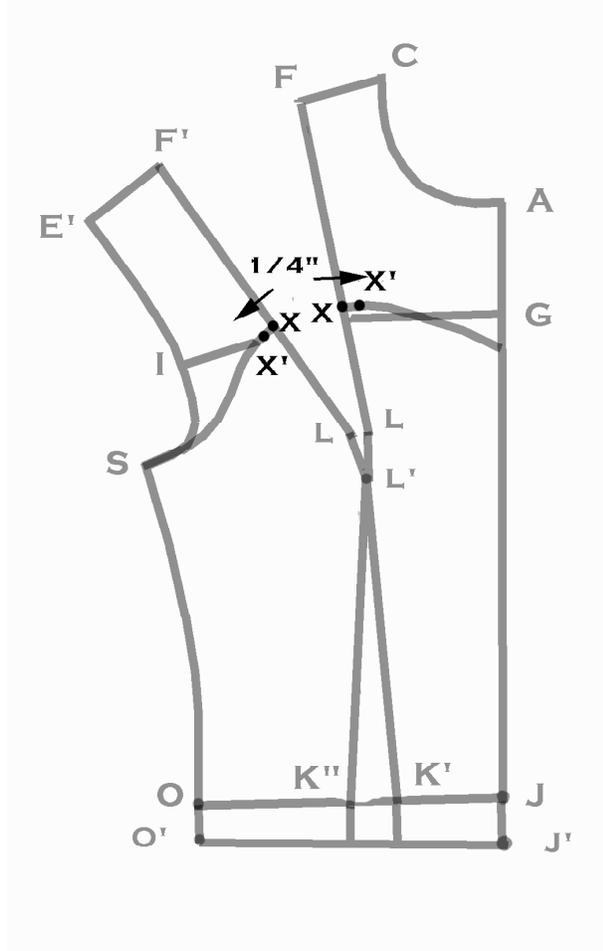
Re-draft the rest of the lines through the new L'. This lengthens the waist dart, shortens the princess dart, and therefore raises the bust point, which counteracts for gravity.

NOTE: If you forget to raise the bust point, your finished garment will make the bust look droopy. And sad.



Now you can transfer your design line S to Y, to the paper pattern. I don't like to do this until I raise the bust point, because if done before, you might not have the "coverage" you desire.

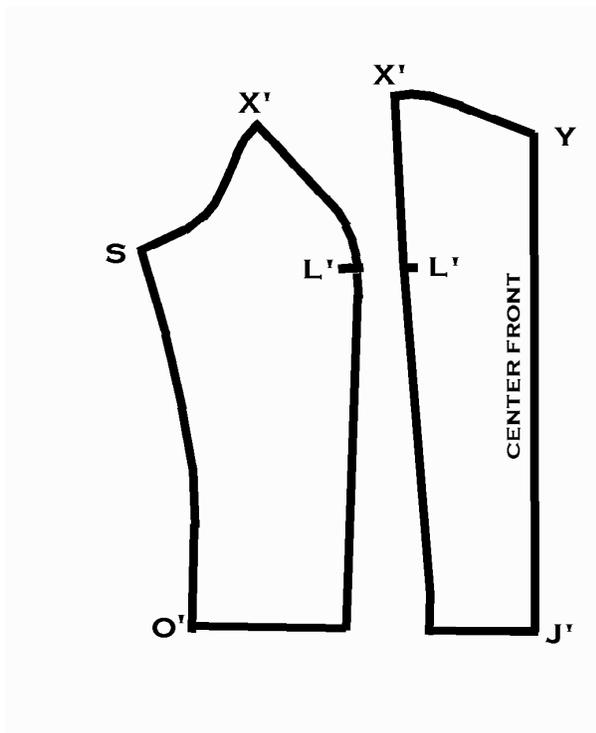
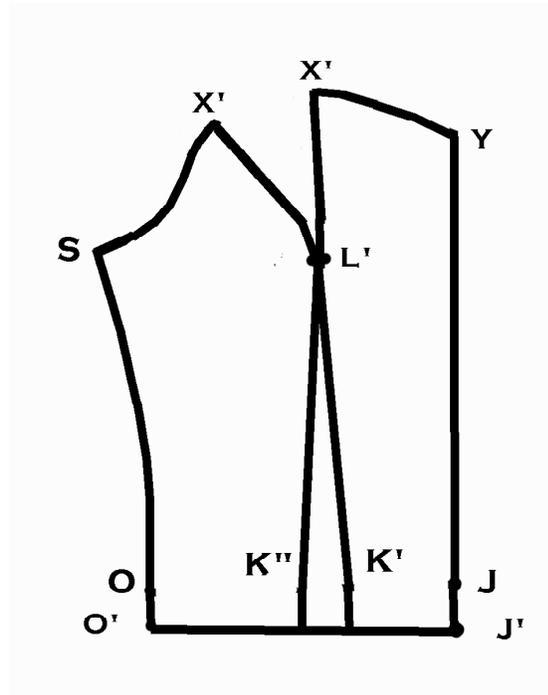
Where the princess dart lines intersect the style line, you will want to move away along the style line, from X to X', by 1/4 inch (6mm).



Re-draft the princess lines down from points X' to the NEW point L (new bust point). This will make the top line of the garment grip the chest, which will help to contain the bust.

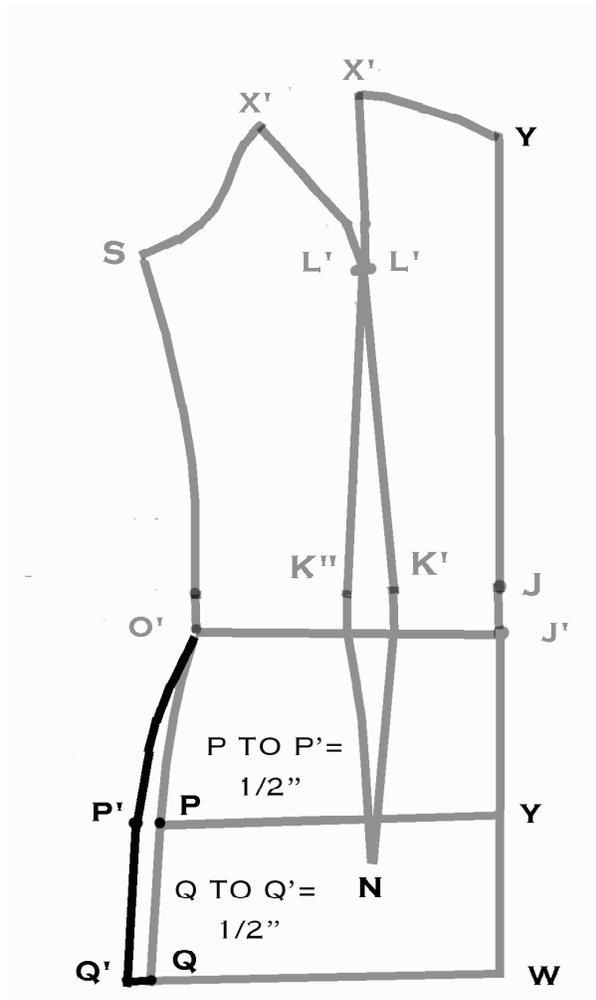
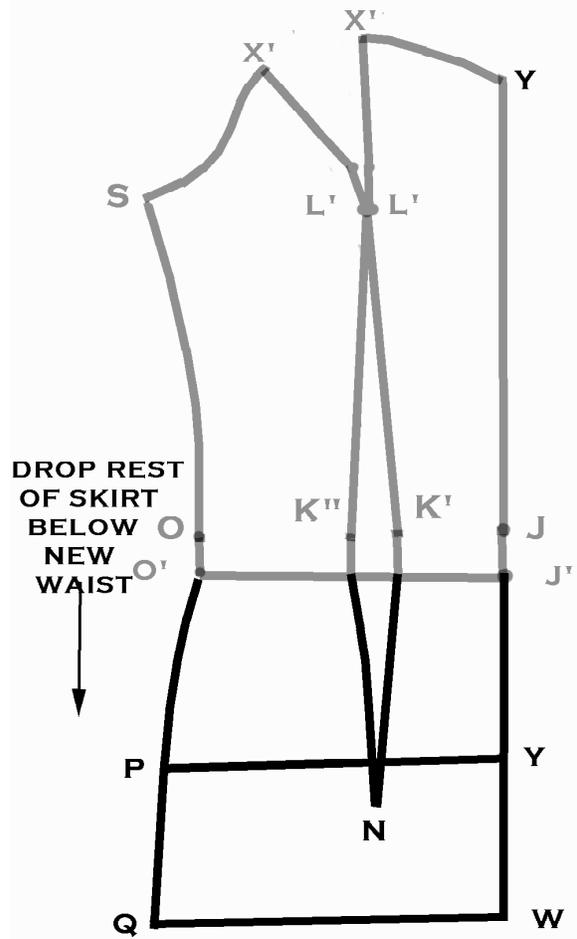
On the side panel, if taking this out makes the bust curve too pointy at point L', then flatten L' by about 1/4 inch (6mm).

We now have our front foundation draft, which in this case ends at the lowered actual waist, O' J'.



If you separate the two pieces from the draft, you will get the princess line bodice front.

If what I call a “long line” is desired, before you separate the two portions of the draft, you will add the lower portion of the moulage to the new waistline.



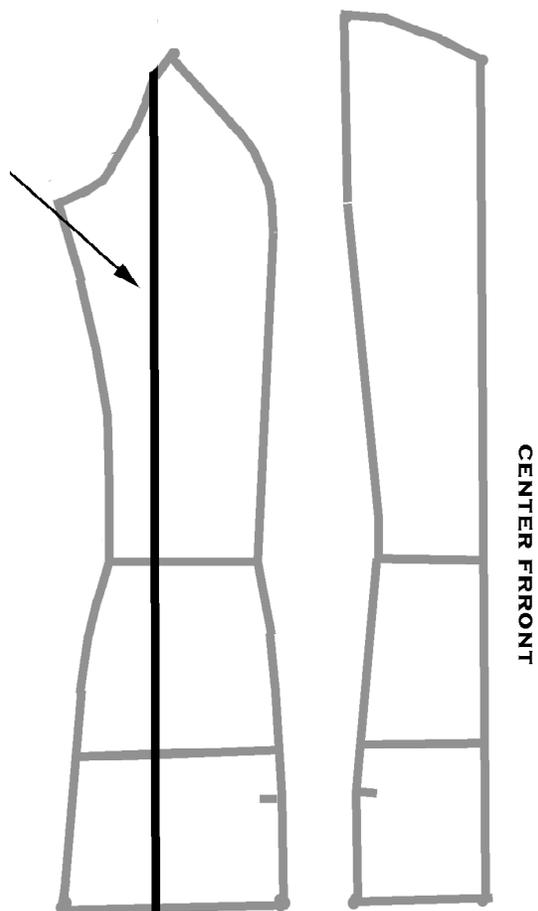
After you add the lower portion of the draft, be sure now to add wearing ease for the lower half only. We have added here at the half-hip (P to P'), and the full-hip (Q to Q').

The rule of thumb here is, 1/2 inch (1.2cm) total for every 2 inches (5.1cm) total circumference wearing ease, with 2 inches (5.1cm) total circumference being the minimum.

If you are going to be wearing this longline over a skirt, you want to double the amount of ease added, so the bottom of the garment doesn't ride up because of the extra fabric of the skirt underneath. The black line shows how this is added.

Separate the panels from each other, to get the princess line draft.

The finished princess line longline draft looks like this:

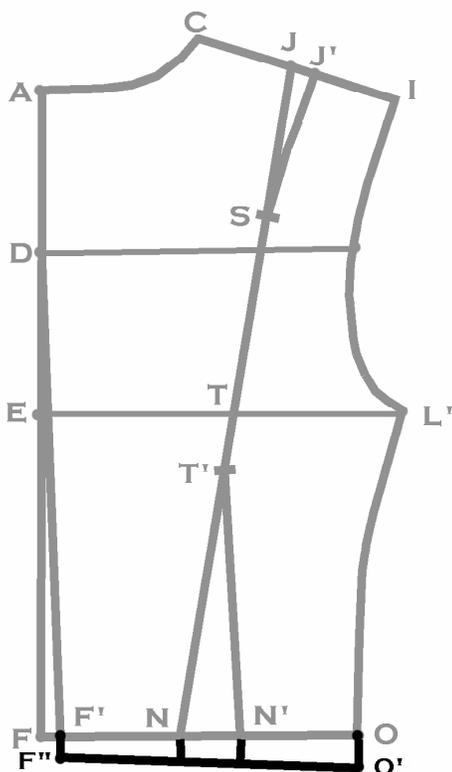
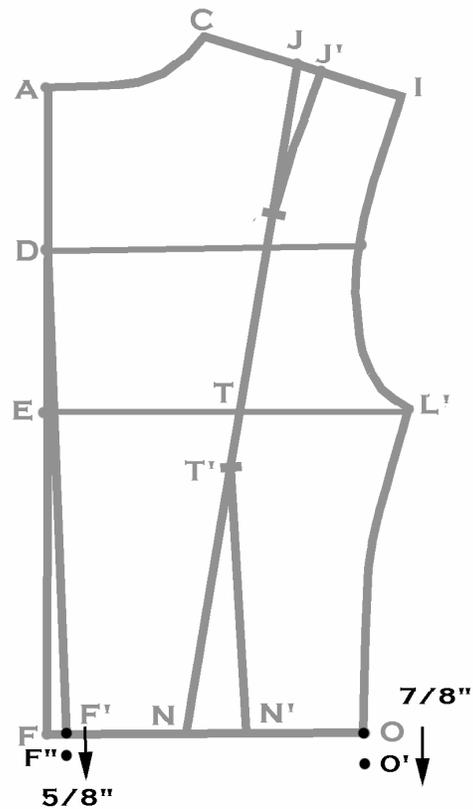


Note: On the longline draft, make sure you mark the actual waistline on the foundation draft pattern. Be sure to transfer that to the fabric when marking the fabric. You will need this line later when you construct!

Foundation Layer Back:

The back is easier than the front, because we don't have to move bust points.

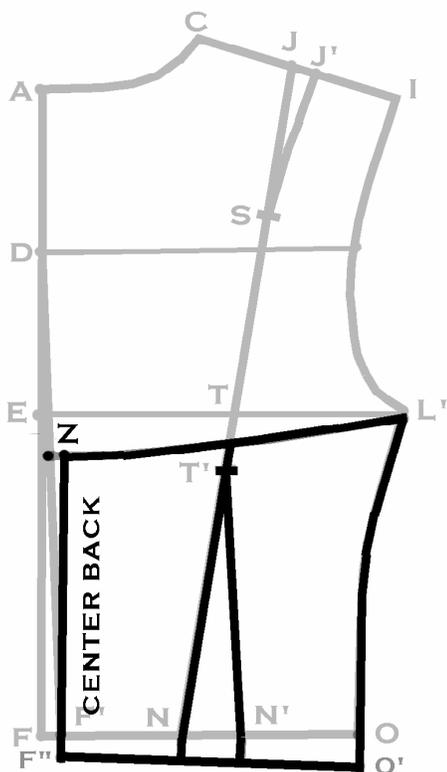
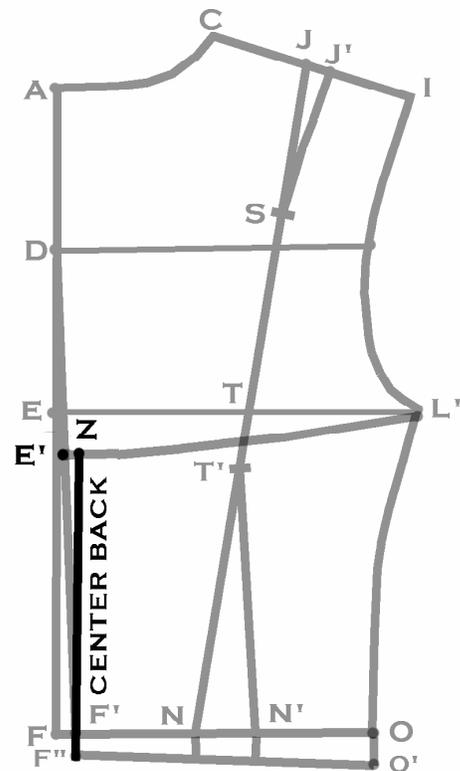
Starting with the Moulage back, you will lower the side at point O to O', by 7/8 inch (2.2cm) to match the side seam on the front. Then you will lower the center back at point F' to F'', by 5/8 inch (1.6cm).



As you did in the front, connect the points F' to F'', O to O', and F'' to O', to re-draft the new waist.

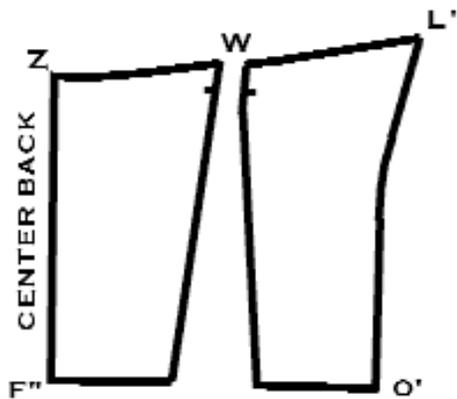
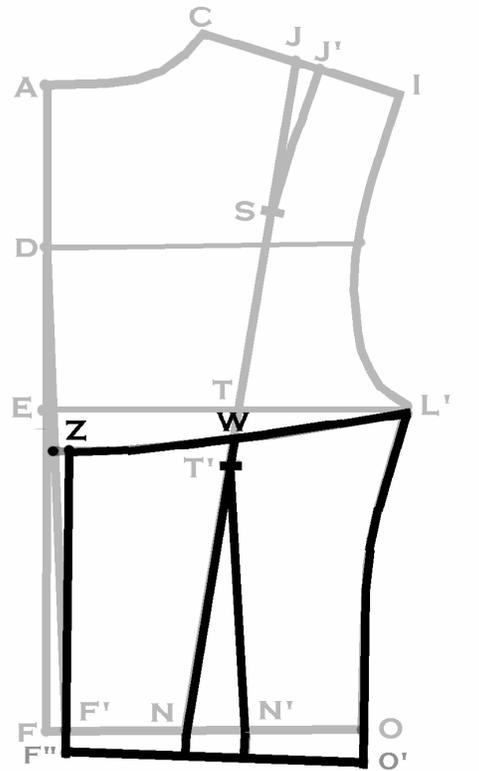
Also make sure the back dart depth on the new line equals the distance between N and N' on the old line.

Draft the new center back line from the point you just marked, from point Z to point F".



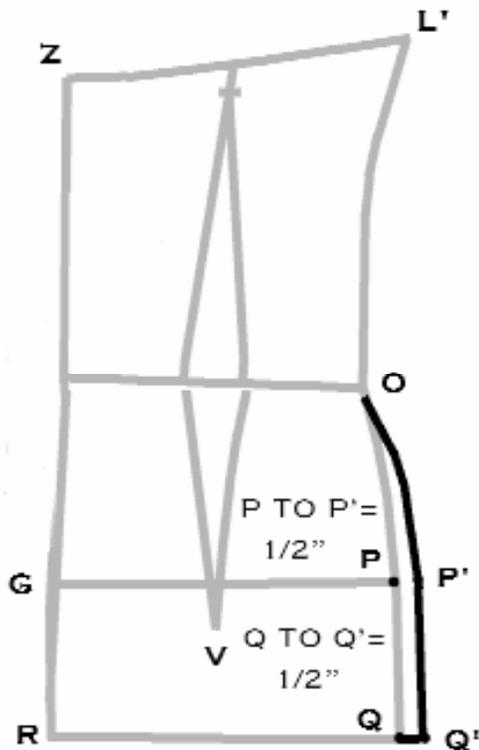
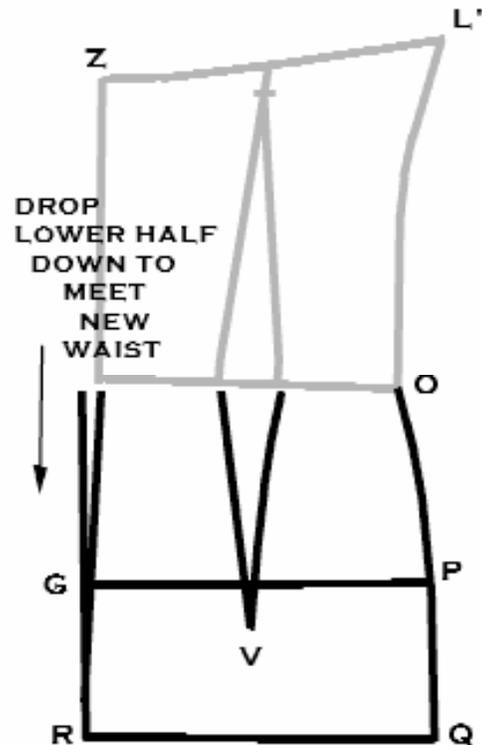
The black lines here indicate the foundation draft for the bustier back.

For a princess line back, you will take this back draft, and:



Separate the two panels out to create the separate parts of the princess line back.

If the long line is desired, before separating the two panels, add the lower portion of the back to the waist.

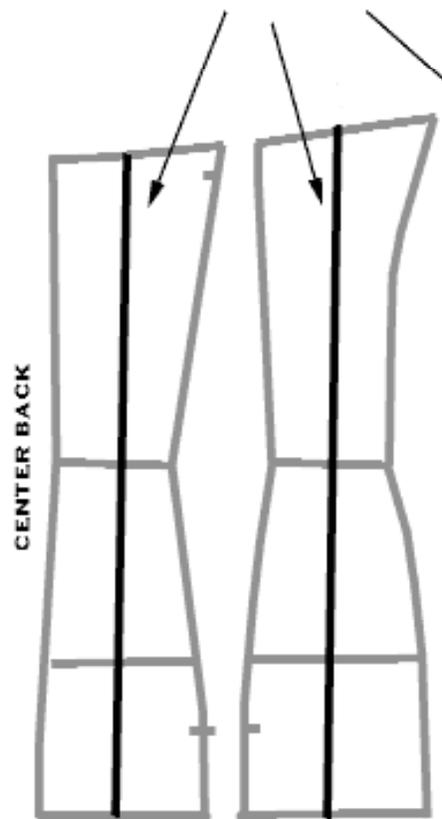


Be sure to add wearing ease at the half-hip (P to P') and full-hip (Q to Q'), using the same amounts as the front.

As for the front, if you are going to be wearing this longline over a skirt, you want to double the amount of ease added, so the bottom of the garment doesn't ride up because of the extra fabric of the skirt underneath.

The black lines show how this is done.

Now separate the back portions of the draft to create the back princess line long line draft.



NOTE: On the longline draft, make sure you mark the actual waist line (O'J') on the foundation draft. Be sure to transfer that to the fabric when marking the fabric. You will need this line later when you construct!

ONE-DART BODICE:

There are times when you will desire a one-dart bodice. These are a little more difficult to fit, but provide a clean line, especially around the top of the garment.

The Mermaid dress shown here was drafted from a one-dart bodice.

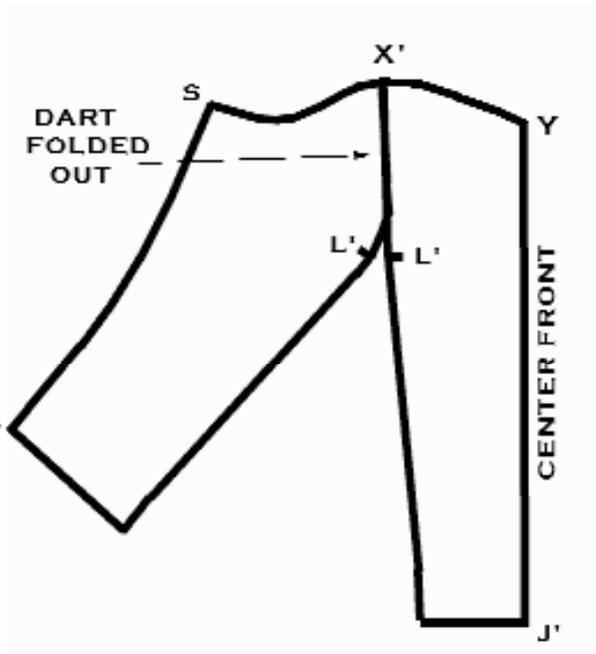
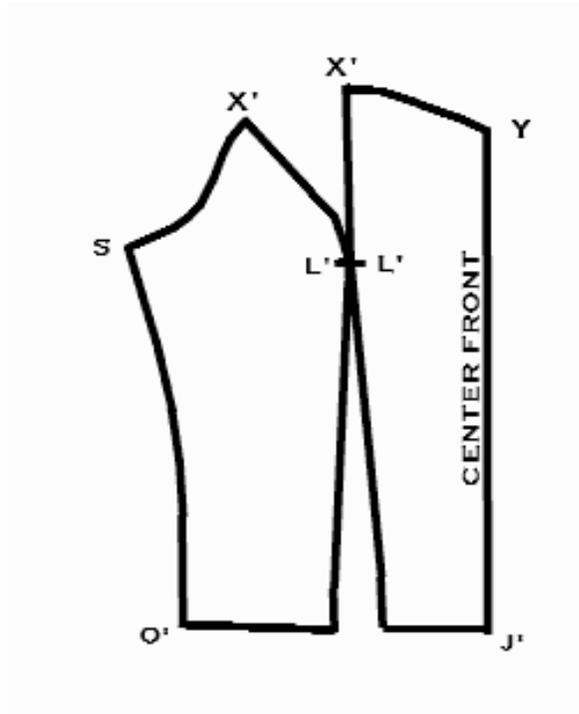
(An aside here: There was a rumor going around after my "Designer Techniques" book was published, that this woman is really a man. Not true--I know for a fact. So stop it already.)



Detail of the Mermaid Gown bodice

FRONT:

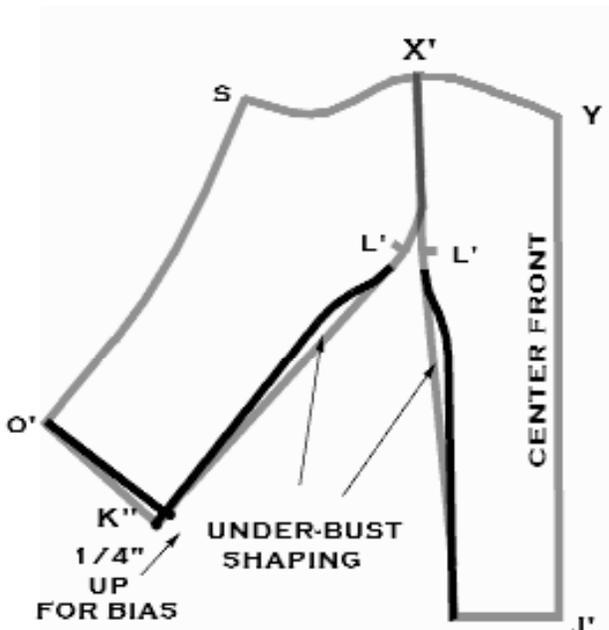
For the bodice front, start with your front draft.



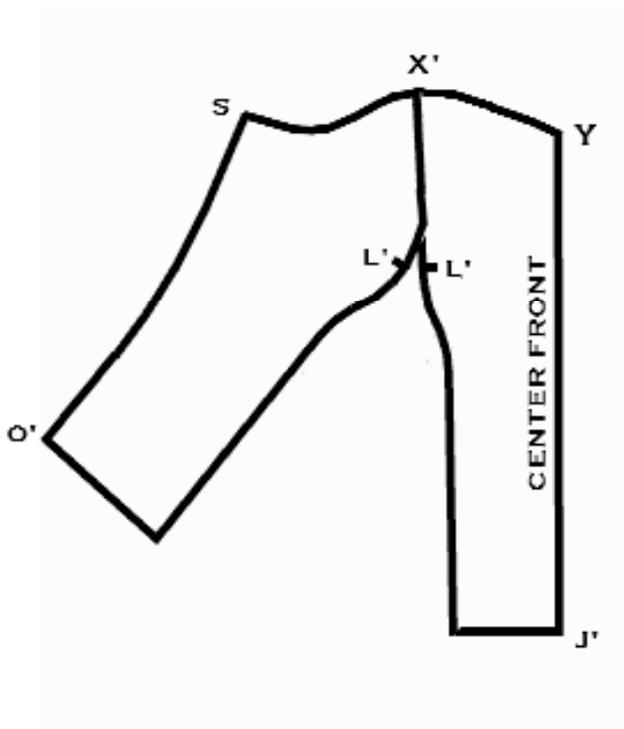
Then join together the X' on the side with the X' on the center panel, essentially folding out the princess dart. This will make the lower waist dart spread open.

You will do some shaping under the bust (black lines) when fitting the muslin, to create the "cup".

Also, you will raise the side leg of the dart (K'') by 1/4 inch (6mm). Re-draft the waistline to this new point.



Notice how this leg of the dart falls on the bias? By shortening this leg of the dart, and stretching it to match the other leg during construction, you will eliminate any puckers that would occur during the life of the garment.

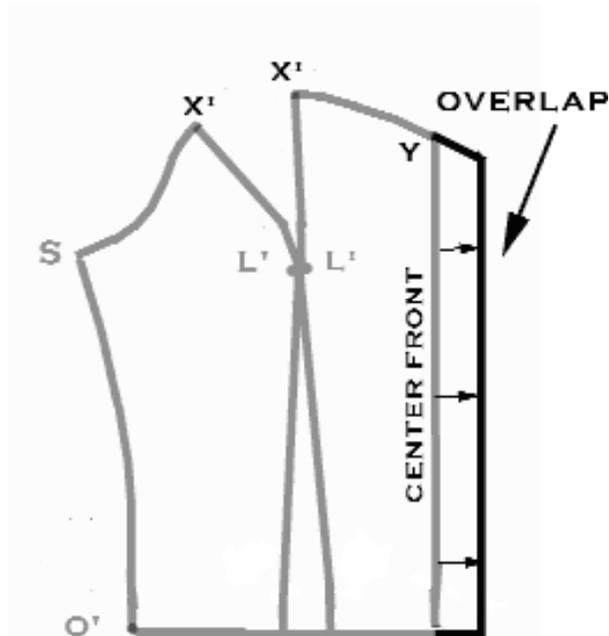
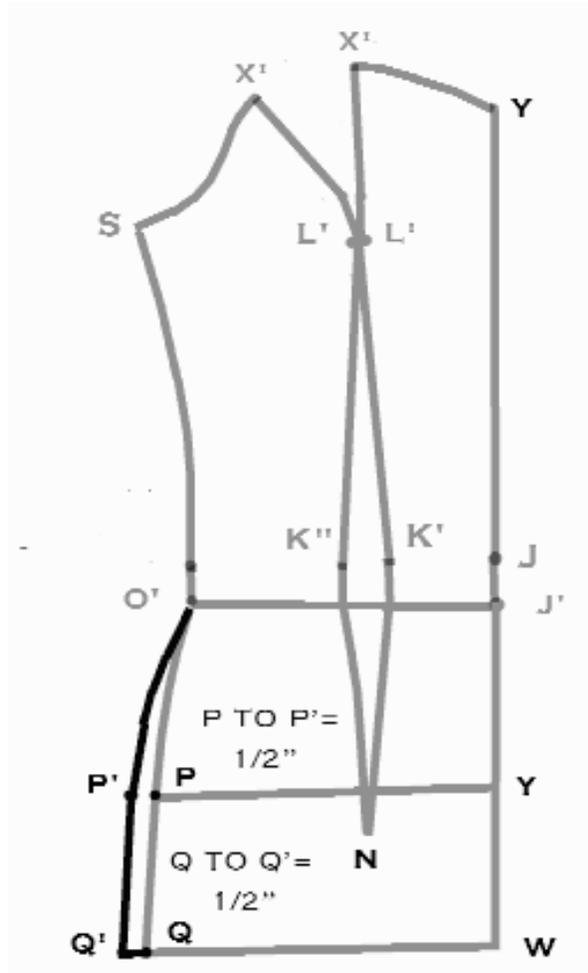


This is your finished front draft for a one-dart bodice.

Overlap and Underlap:

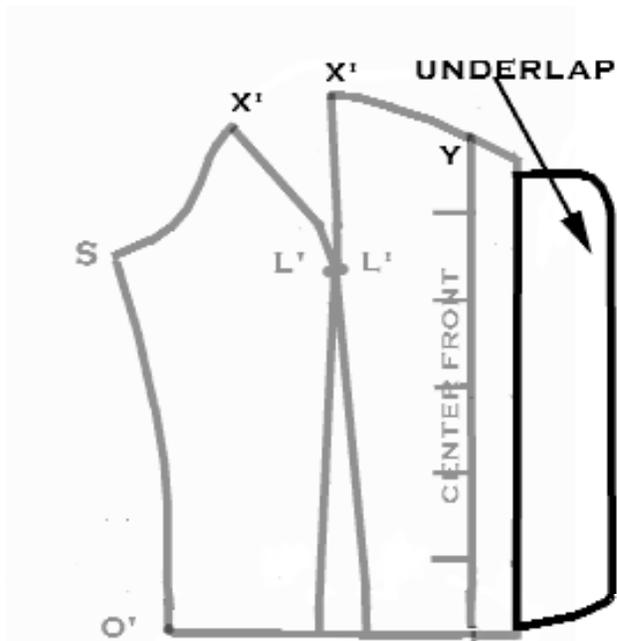
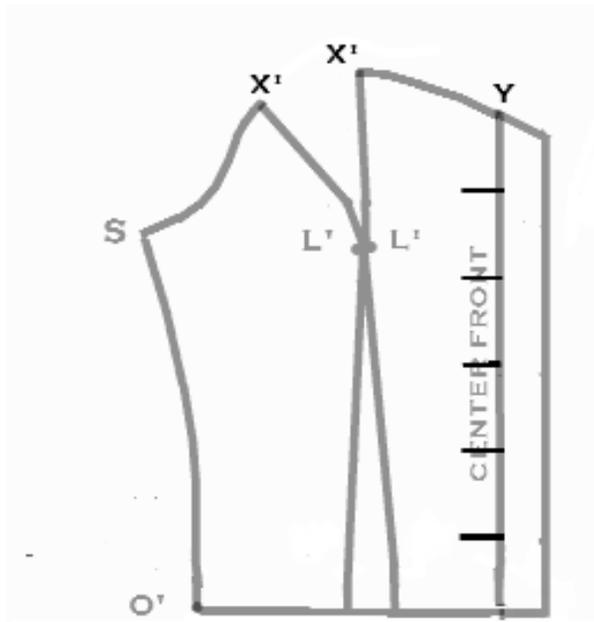
If you are closing a bustier with buttons, you will need to draft the overlap and underlap. The overlap gives you the extra fabric to accept the buttons and buttonholes, while the underlap gives extra fabric behind the buttonholes. The underlap keeps the skin from showing through the buttonholes in the wearing of the garment, as well as contributing to the comfort of the wearer.

You decide where you want the button closure—I prefer the center front, as this is easier to put on.



Draft a line parallel to the center line, by the diameter of the button plus 1/8 inch (6mm). Blend the top of this line with the design line of the garment.

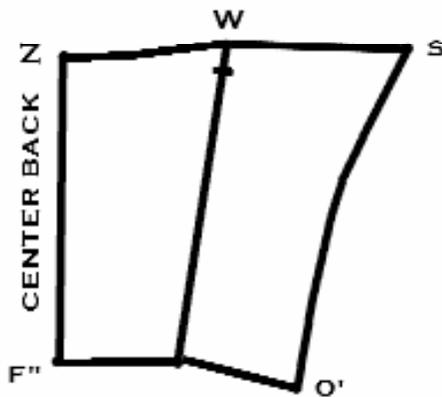
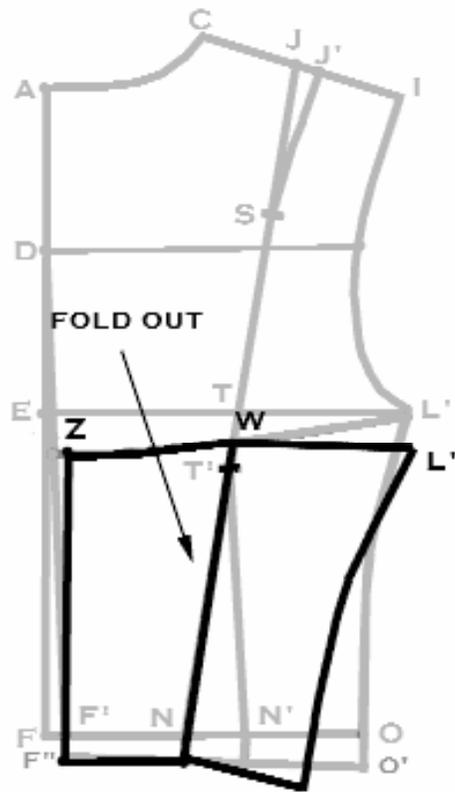
Determine button placement and mark. It's a good practice to have one button level with the bust point on the garment—this makes for a more secure closure at the bust.



You will draft the underlap now, making it at least 1 1/2 inches (3.6mm) wide. Blend the top and bottom lines into the design of the garment, as shown. You will trace out the outlines of the underlap, and cut that as a separate piece.

BACK:

For the back of this bodice, you will fold out the back waist dart.



It will look like this. Simple, no?

WHERE TO GO NOW?

Once you've drafted this pattern, both front and back, you want to check fit on the subject. You will cut a test garment out in muslin (NOT pre-shrunk) or other stiff fabric.

Keep this in mind when laying it out on the fabric:

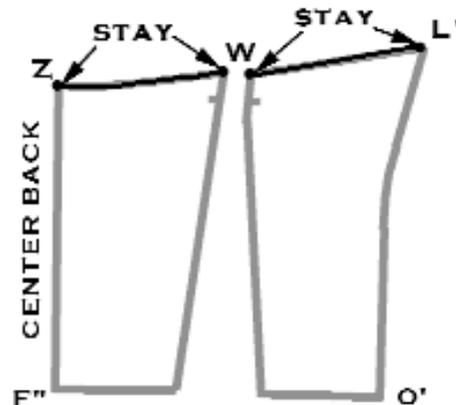
CUT WITH THE LENGTHWISE GRAIN PARALLEL TO THE WAIST!

This means the center front and back are perpendicular to the selvedge. You do this, because the lengthwise grain of the fabric has less stretch than the crosswise grain. (We will cut the supporting fabrics the same way later.)

When cutting, I like to mark all seam lines so I know exactly where to sew. It makes for more accuracy. Also, **BE SURE TO MARK THE ACTUAL WAIST LINE (O'J') ON ALL TEST GARMENT PIECES!**

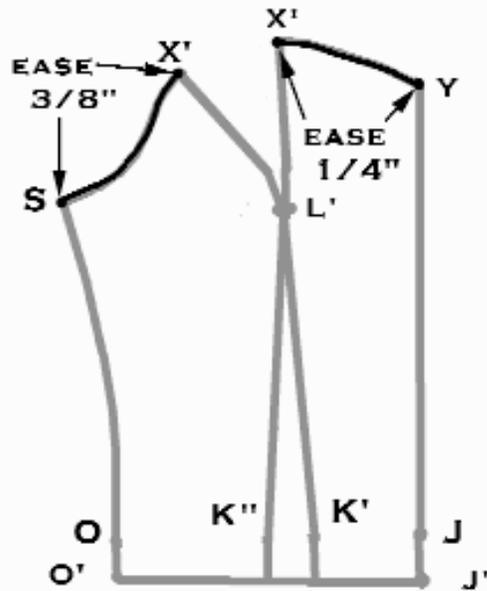
After cutting, you want to stay the topline of the garment before you sew.

Using fabric selvedges, or strips of organza torn along the lengthwise grain, you will stay the topline seam on the back pieces in a 1:1 ratio, along line Z to W, and W to L'.



You will ease the topline seam of the front panels slightly. Cut organza strips on the lengthwise grain, and mark the seam length minus 1/4" (6mm) for the center panel, seam length minus 3/8" (9mm) for the side panel. On the center front panel, pin the organza onto the seam line, easing the seam from Y to X'

On the side front panel, pin the organza to the seam line, easing by 3/8 inch (9mm) from point X' to point S. After easing, stitch these seams to the organza. The organza serves also to stay the edge so it doesn't stretch.



Now you can sew the seams of the muslin garment together with machine basting.

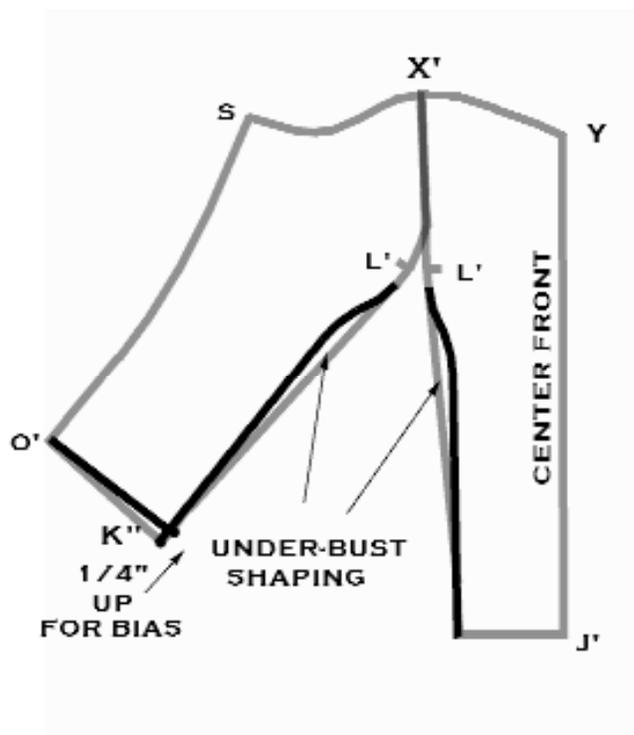
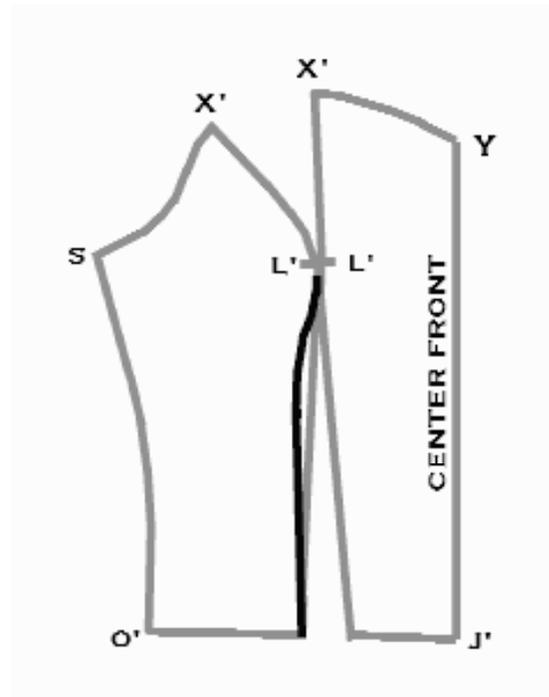
Machine-baste some boning along the side seams, center back, and center front. Don't put boning along the princess seams (or the one dart on the one-dart bodice), as you need to fit that to the rib cage.

When the test garment is on the subject, you want to look at how it fits, especially under the bust where the bust joins the rib cage. If you have excess fabric there (too loose), the breasts will slip down and out of position. Pin out the excess.

Also look for any gapping along the topline, and pin out any excess there as well, to make a smooth, gap-free fit.

Transfer these adjustments to the paper pattern and correct the pattern.

The adjustment under the bust will look like this for the princess line:



The adjustment under the bust for the one-dart bodice looks like this. (You are no doubt familiar with this picture.)

OUTER LAYER:

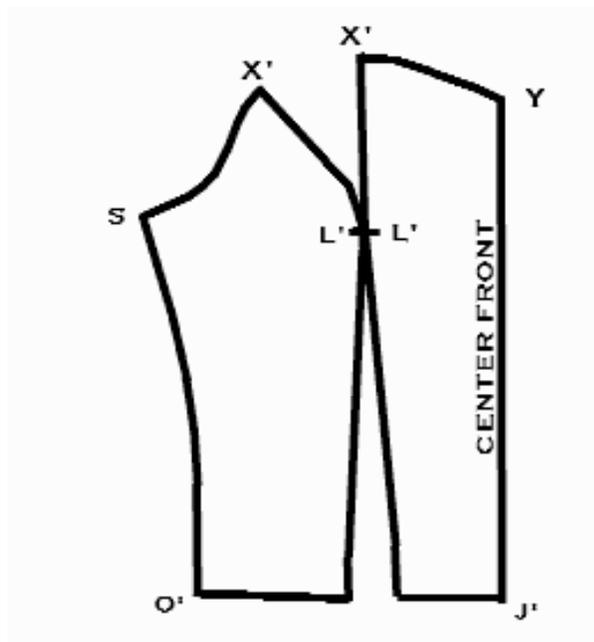
Once all the adjustments are done, you have your foundation draft, which is the pattern for the foundation layer. Make a copy of this foundation draft, and use the copy to generate the outer (or upper) layer pattern pieces.

The outer layer is, as I said, just along for the ride. There are two layers of fabric in this: Fashion fabric, and interlining. Because of the thickness of fabric included in the bustier, the outer layer pattern needs to be graded out to accommodate them; otherwise, if you cut all the layers from the same pattern, the garment would be too small after you constructed it.

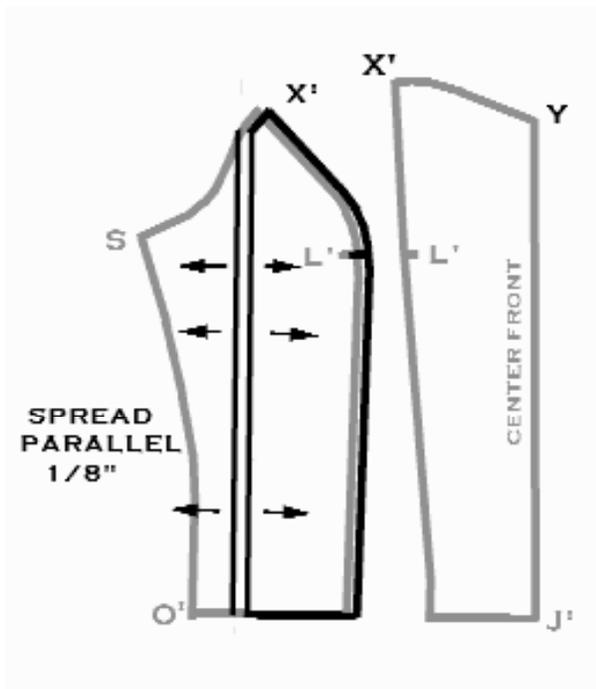
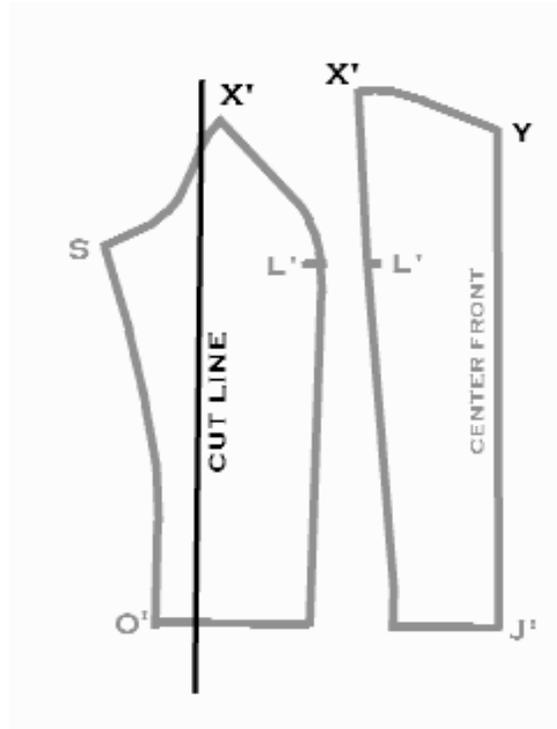
You need to add a total of 3/4 inch (1.8cm) to the circumference, to accommodate the extra fabric. Since we are working with half the pattern, we need to add 3/8 inch (9mm). I'll cover first how to add this to the princess line bodices, both waist-length and long line, then cover the one-dart bodice separately.

PRINCESS LINE, WAIST-LENGTH:

For the front pieces, start with your copy of the two front pieces of the foundation draft.



You will not do anything to the center front panel. However, you will draw a slash line down the front side panel, as shown.

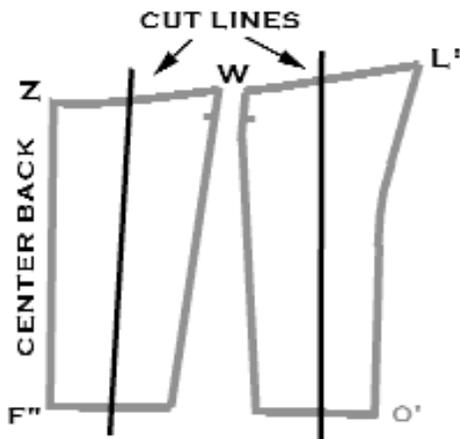
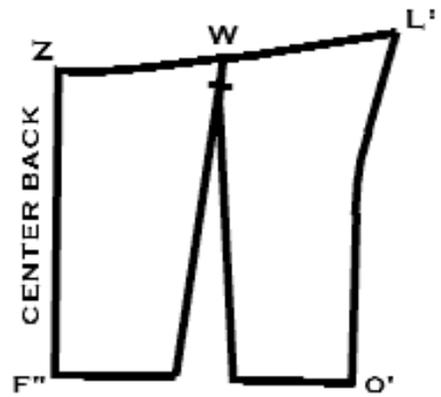


Cut along this line, and spread parallel by 1/8 inch (3mm).

Blend the portion of the curve that is distorted.

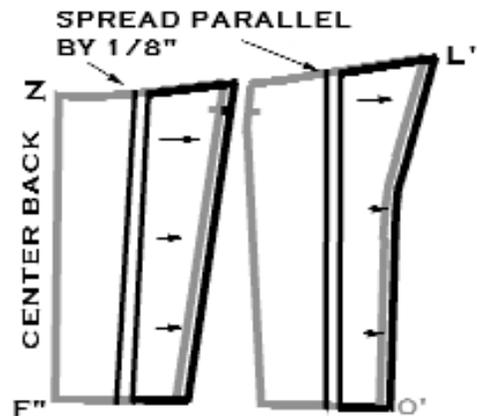


For the two back pieces, start with your copy of the back foundation draft pieces.

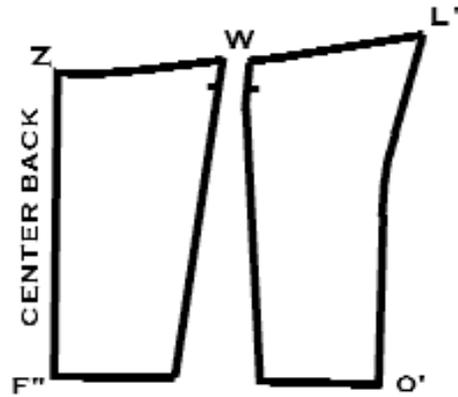


Draft lines up through the centers of both pieces.

Cut along both of these lines, and spread parallel by 1/8 inch (3mm).



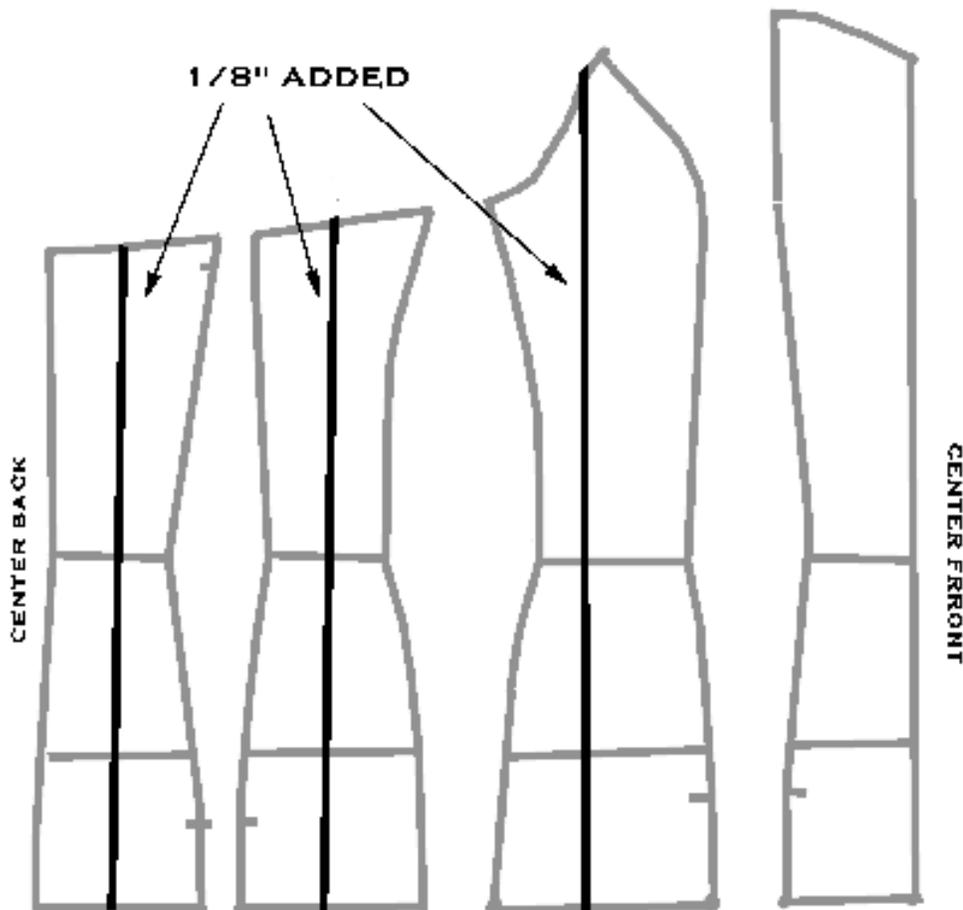
You now have your finished back upper layer pieces.



For the longline draft:

The longline draft also needs circumference added, but also needs length removed at the waist. To begin, make copies of the foundation draft of the longline.

This illustration shows where the slash lines occur. Draft them in, cut, and spread parallel by 1/8 inch (3mm) per line.

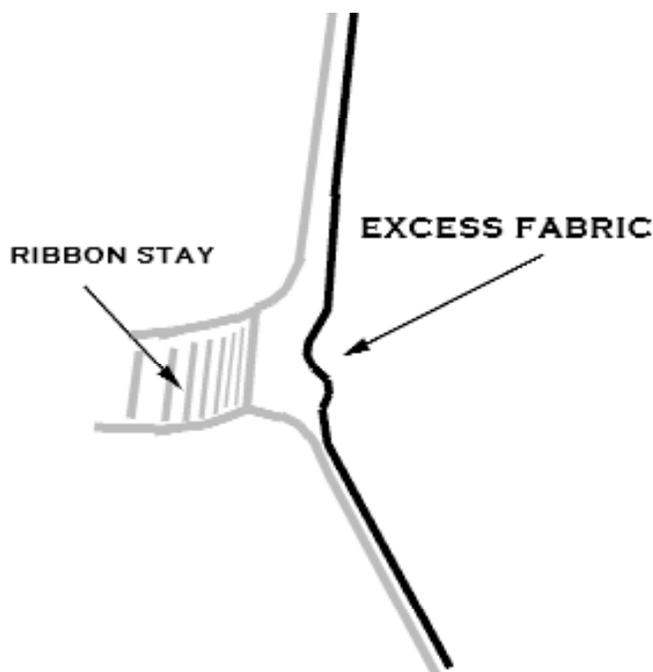


The next step requires some explanation:

In the photo of the black longline bustier to the right, notice how Shelley has her hand on her waist? This is what we call a “save”.

There is a ripple that occurs at the waist on this garment, which taught me what needs to be done to the upper layers of this draft. (This is how I learn sometimes, by making the mistake.)

As I mentioned earlier, there is a ribbon waist stay inside the garment. This stay is cut $\frac{3}{4}$ inch (1.8cm) shorter than the actual waist, so it digs into the flesh. This anchors the garment to the body. (In olden days, it was called the “petersham”, because it was made from petersham ribbon.)



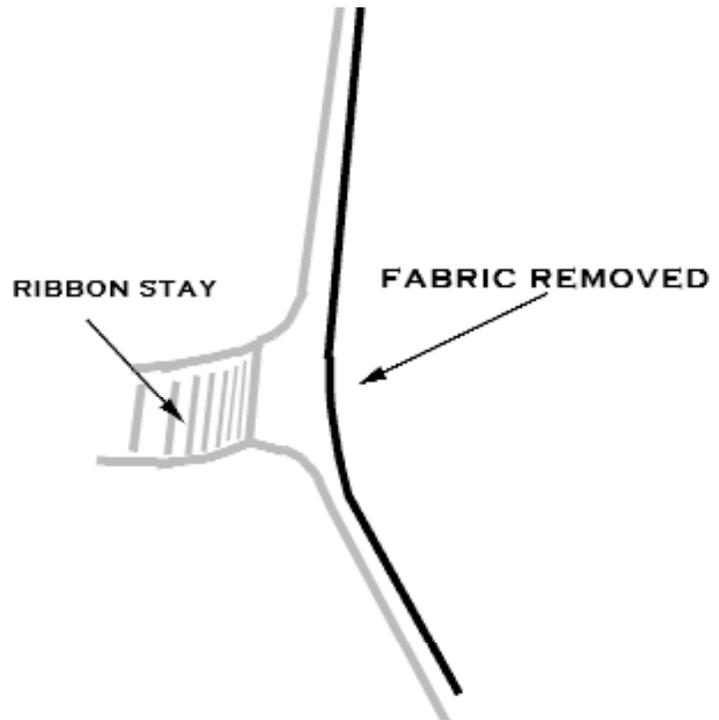
In the illustration to the left, I’m showing a cross-section of the waist portion of the longline garment. The foundation layer is in gray, and outer layer is in black. Notice how the ribbon stay digs into the flesh? This draws the bottom of the foundation layer up, making it shorter. This makes the outer layer too long.

The outer layer will buckle right over the waist stay, if this excess isn’t taken out in the pattern.

After you make the correction we will discuss below, the outer layer will be shorter, and will fall smoothly over the area at the waist stay. This is because the excess has been removed.

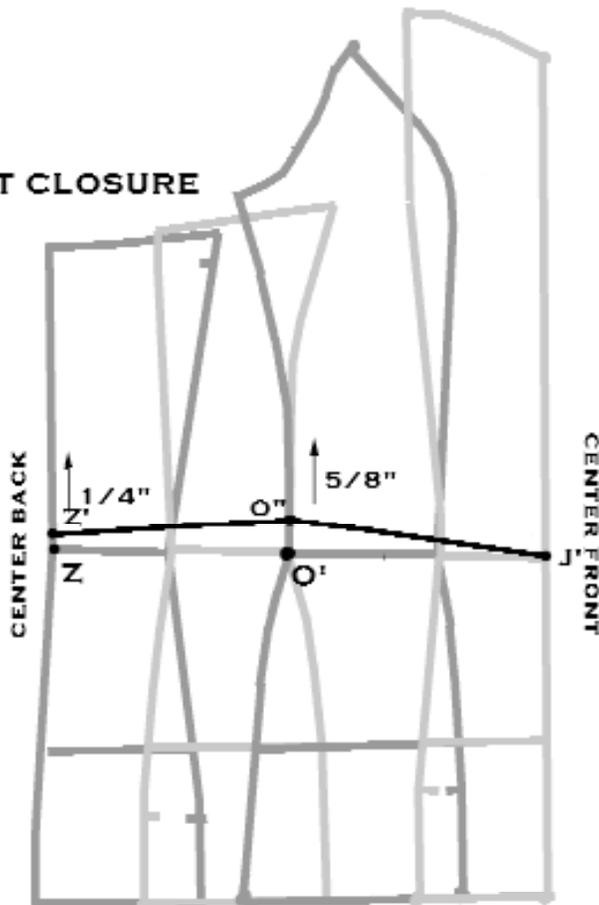
Take the outer layer pieces, and overlap them so the waist makes a continuous line.

For a garment that closes in the center front, raise up at the waist point O' to O'' by $5/8$ inch (1.6cm), and raise up at the center back from point Z to Z' by $1/4$ inch (6mm).



Draft a line, starting at J' at the center front, curving up to point O'' , and tapering down to point Z' at the center back.

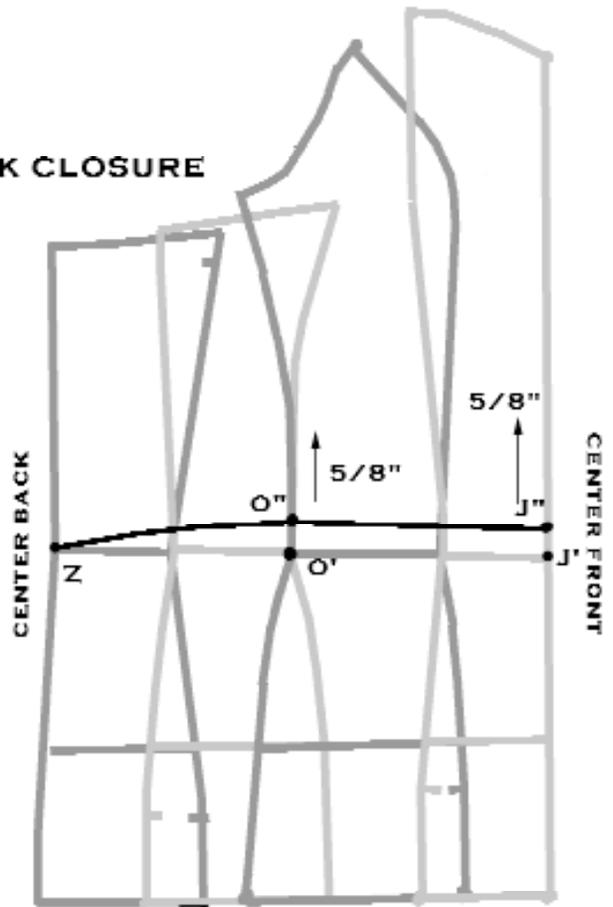
FRONT CLOSURE



A bit of anatomy: We have more flesh in the abdomen, and at the sides. There is less flesh at the spine. Knowing this, a waist stay will dig in more at the sides and front, and less at the spine. If we close the garment at the center front, we need to make the front seam match the foundation layer, so we don't remove any excess there—it comes out of the side and center back. Since we have less flesh at the spine, we remove $1/4$ inch (6mm) there, and $5/8$ inch (1.6cm) at the side.

If the garment closes at the center back, you will raise up from J' to J'' at the center front, by 5/8 inch (1.6cm), and at point O' to O'' by 5/8 inch (1.6cm). Draft a line starting at point Z on the center back, and taper up to point O'' at the side, finish the line by drafting it to point J'' at the center front.

BACK CLOSURE

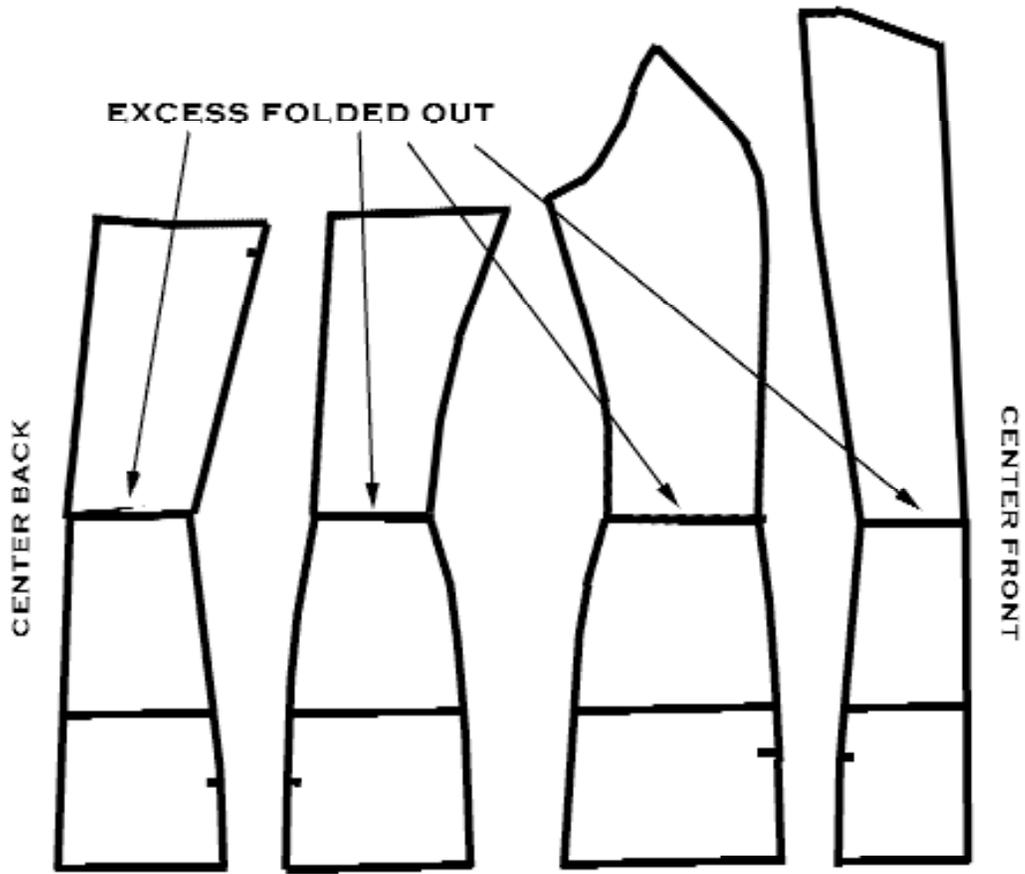


If the closure is at the center back, we don't remove any there so the seams match the foundation layer. We remove the 5/8 inch (1.6cm) at the side, and also at the center front, because we have more flesh there.

These black lines in the two illustrations represent new waistlines.

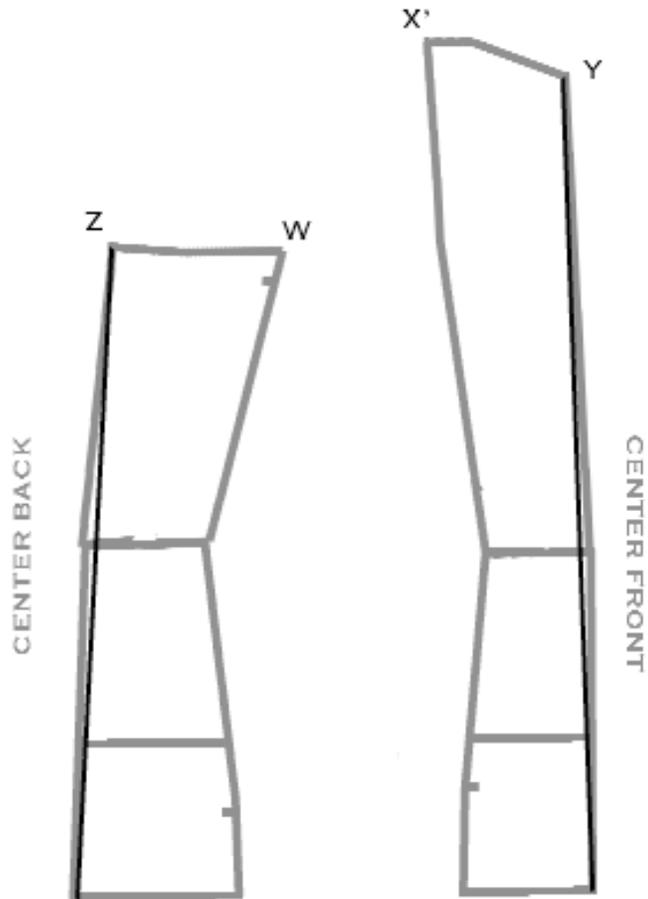
Joining the lines and taping them closed will fold the space between the old, and new waistlines out.

The finished pattern will look like this:



You want to straighten the center front, or center back line after you fold out the excess.

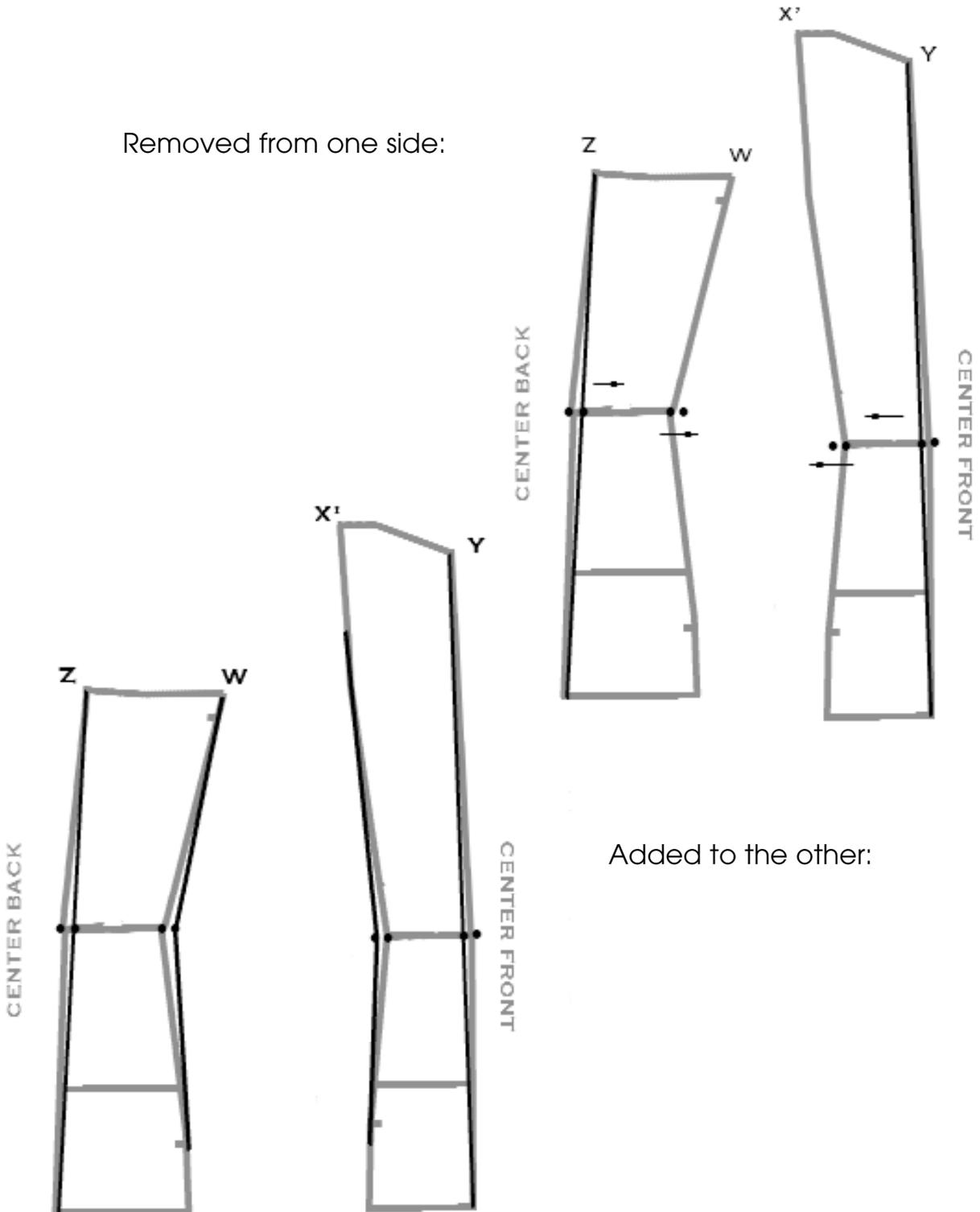
To do this, draft a new straight line from top to bottom of the piece (black line).



Note the portion of the pattern that extends outside this new line.

This portion will be removed from one side, and added to the other side. In this way, you don't change circumferences, but correct for distortion.

Removed from one side:

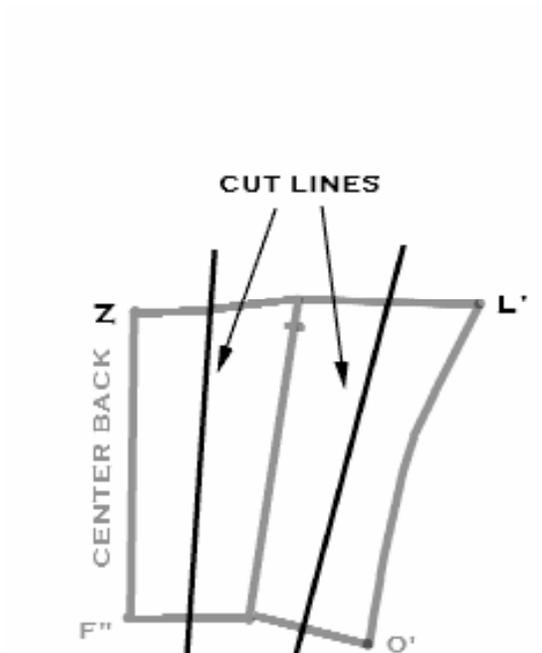
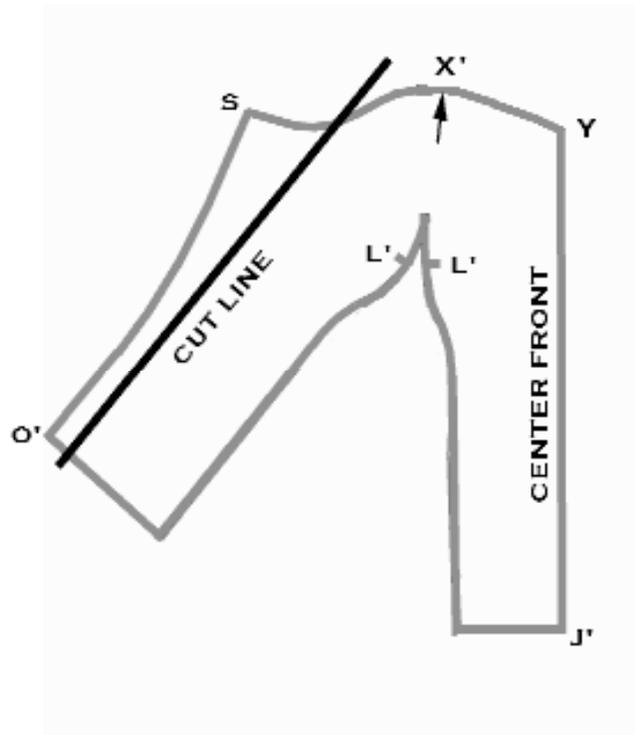


Added to the other:

ONE DART BODICE:

The addition of the 3/8 inch (6mm) of ease into the foundation, to create the upper layers of the one dart bodice, is done in a similar manner to the princess.

In the front pattern piece, the insertion is put in at the side panel, as shown.



In the back pattern piece, the two insertions are located as shown here.

They are spread parallel, just as you did in the princess line pattern.

MATERIALS:

It's nice to know the materials you will need to construct the bustier. I am including photos, so you can take this to your fabric shop. Sometimes I use terms that the local fabric shop hasn't heard, but when you show a photo, they can usually recognize it.

A note here: shop local! The small local shops are more likely to know fabric, and know how to get you something off the beaten path, than the larger chain stores. You may pay a little more for your fabric, but you're buying a relationship as well.

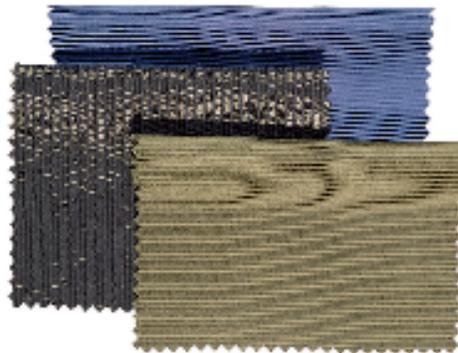
WE'LL START WITH THE FABRICS:

For the outer layers, you can use any fabric your heart desires. This is because the outer fabric doesn't bear any of the strain, so its job is to just look good. As Susan Khalje says, "Like paint on the wall."

I'm going to hold forth for a moment about fiber content. There are those who, when I say that I like man-made fibers, clutch their pearls and gasp! To them I say, that as long as the fabric is beautiful (or I can make it beautiful), that's all I care about. Also, man-made fibers last longer than the natural fibers, and since I'm going for a 25-year useful life on a garment, man-made fibers fill the bill. So, for those of you who have resisted man-made fibers because of what people will think, go with my blessing, and use whatever looks beautiful to you.

OTTOMAN, FAILLE, BENGALINE:

Some favorites of mine are Faille (also known as bengaline), ottoman, and moiré. These fabrics are characterized by a strong crosswise ribbed effect. These fabrics may shrink under steam, so pre-shrinking them is a good idea. I take all my fabrics to the dry cleaner, and have them steam the fabrics to pre-shrink them. I've found that, for the money spent and time saved, you get a more even result than if you do it at home.



Moiré is made from faille, and pressing two layers of faille together imprints the optical effect of the moiré. Since the crosswise rib is usually cotton, the moiré effect is not permanent. Knowing this, you need to experiment with steam to see if it is going to make the moiré effect disappear. Sometimes it will, sometimes it won't, but do test this fabric before you use it!

Pressing these fabrics takes a little care. You don't want to press them against each other, because you will get the moiré effect. Also, use a surface that is flat (like cotton drill) so you won't get the impression of the pressing surface onto the fabric.

SATIN:

Satin is good for the outer layer, as well as the lining. I like a flat, or low-texture fabric for the lining, and satin fills the bill here. This is because the garment, which fits tightly, will imprint any texture onto the body during wearing. One needs to think about what the body will look like when the garment is removed (ESPECIALLY

on a wedding day). You don't want the wearer to look like she has a skin disease at precisely the wrong moment!



The best to use is what is called either "slipper satin", or "bridal satin", or "duchesse satin". You want something a little stiffer here, because over time, a thinner lining will look "worked over" after wearing.

When marking, avoid a tracing wheel that has points on it—use the smooth tracing wheel, or what is called a "hera" marker. The pointy wheels tear the fibers, and damage the fabric.

Use a dry iron to press satin, and press seams over a hard seam roll, or "seam stick" as they're sometimes called. I cover my seam roll with smooth cotton, so I don't get any marks on the satin.

TAFFETA:

Taffeta is one of those fabrics that many sew-ers would rather chew glass than sew with. This is because it puckers, and once puckered, stays that way.

I found a way around this, though, for the outer layer of the bustier. I distress taffeta (acetate works best here) before I work with it. There are two ways I do this: The first I call “hammered taffeta”, the second, I call “crushed taffeta”.

To make hammered taffeta, just throw it into a hot washer, with a pair of tennis shoes, jeans, or other item that will beat the taffeta up. Then, put all of this into a hot dryer, and when the fabric is dry—you have hammered taffeta. This creates a pebbly surface that doesn’t show puckers, and takes some of the sizing out so the taffeta has a little more movement.

Crushed taffeta (which you will see in the emerald green bustier example) is made by first wringing the fabric up, like you’re wringing a dishrag. Really twist this tightly. When you get the piece into the smallest possible lump, tie it up with string (or put it into a nylon stocking). THEN—cook it in your vegetable steamer for about 20 minutes. (This is the closest I get to actually cooking something.)

Let it cool, unwrap it, and you’re done—crushed taffeta.

Unwrap the lump of taffeta, and flatten it out by pressing it on the pressing table with your iron. One drawback to using this is, by itself it is dimensionally unstable (it stretches). So, when using crushed taffeta, you will want to cut your pattern pieces out of a cotton batiste and your interlining, then lay these two layers onto the BACK of the crushed taffeta. Pin together, baste, and then cut the crushed taffeta out.

In our example, I will be quilting the emerald green taffeta to the batiste with beads.

UNDERSTRUCTURE MATERIALS:

To make a bustier that will withstand a game of volleyball, I use lots of understructure fabrics. I will describe them below:

WOOL FELT:

This fabric adds loft and weight to an otherwise fly-away fashion fabric.

I use this under the outer layer fabrics, such as described above. An

advantage of wool felt (or you can use a blend of up to 50% rayon) is that there is no grain line. You can cut out a lot of pieces if you are able to arrange them onto the felt. Acrylic felt isn't as successful, but can be used in a pinch.



Since the Soviet Union fell, the sources for good wool felt are disappearing. If you can't get wool felt in your area (this is increasingly common in many areas), you can create wool felt.

Take a length of wool flannel (the cheaper the better), and throw it in a hot washer, and then follow that by a hot dryer. You will lose a lot of length and width, but you will have wool felt.

WOOL MELTON:

Wool melton is a coat fabric, and the best way to purchase this is remnants or end-cuts. Otherwise it can be expensive, but I like the smooth surface under silk taffeta for the outer layer. Felting wool (as described above) creates a similar weight and hand.



COTTON FLANNEL:

Also called “flannelette”, this is the garden-variety flannel that you make winter nighties out of. My favorite is to get end cuts of the children’s pajama flannel—it’s less expensive, and you have those cute prints on the inside of your garment where nobody can see them.



Two things to watch out for here: If the outer fabric is somewhat transparent, use white flannelette. You don’t want the print “reading through”. Also, wash to pre-shrink this fabric. It will fluff it up as well, which makes a better interlining for the outer layers.

BUMP CLOTH:

When you really want substance, get bump cloth. This is the industrial-strength cotton flannel, (it looks like flannelette but is much thicker) and is usually used to interline fine draperies. It’s hard to come by in most places, unless you know someone in a drapery workroom. But it’s nice to know about it!

SIRI COTTON, COTTON BATISTE:

These are thin, plain-weave cotton fabrics. I generally use these when I’m also using a crushed taffeta. Mark and cut out the outer layer pattern pieces in this fabric. Sandwich in a layer of wool felt, and the fashion fabric on the other side, and you’re ready to go!

TWILL FABRIC:

Twill fabric is the foundation of these bustiers. Twill fabric can be any color or fiber content, but is most commonly known as jeans fabric.

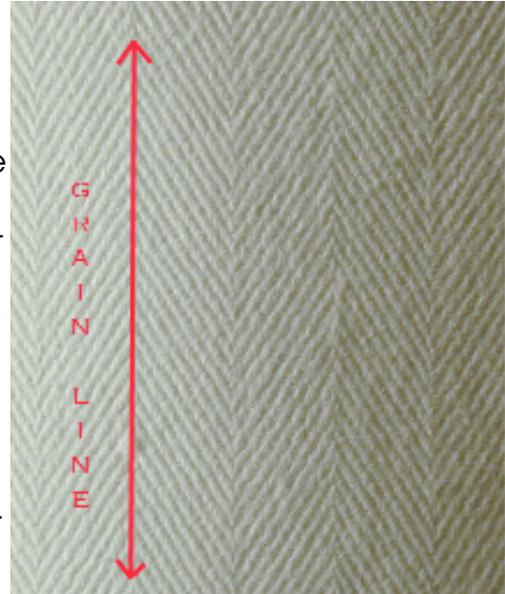
Most important here: DO NOT PRE-SHRINK THIS FABRIC! When the fabric was processed, and eventually rolled onto the bolt, there was always some lengthwise tension on it, which eliminated lengthwise stretch. You want to maintain this.



Pre-shrinking builds in stretch, which will be disastrous in a strapless garment. Remember how your jeans came out of the clothes dryer fitting snugly but after wearing, they relaxed? It works for jeans, but not for a bustier.

COUTIL:

Coutil is a fabric specifically made for corsets. It is a herringbone weave on the lengthwise grain, and is woven so there is no stretch in the crosswise grain. The width of the herringbone stripes in the example here is approximately 1/4 inch (6mm). You can get it on-line, but it will be more expensive than your garden-variety twill, and unless you really need control for a figure, it's not necessary. Another substitute for this is what is called "mattress ticking". That's the fabric they used to cover mattresses with—it needed to be sturdy and not stretch. It's good to know your options here, just in case you want to use them.

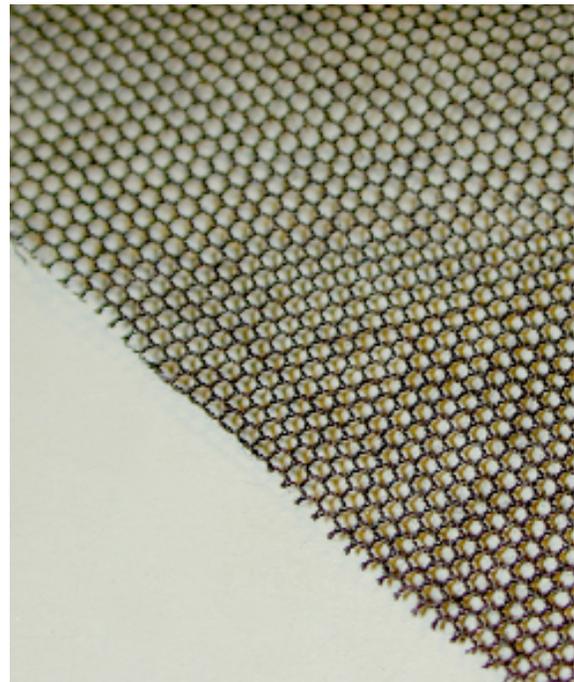


COTTON TULLE (ALSO CALLED COTTON BOBBINET):

When you're making a strapless dress that isn't form-fitting, you will want to make the foundation layer out of cotton tulle. The foundation layer will function as the facing for the topline of the garment, which we will go into later in the text.

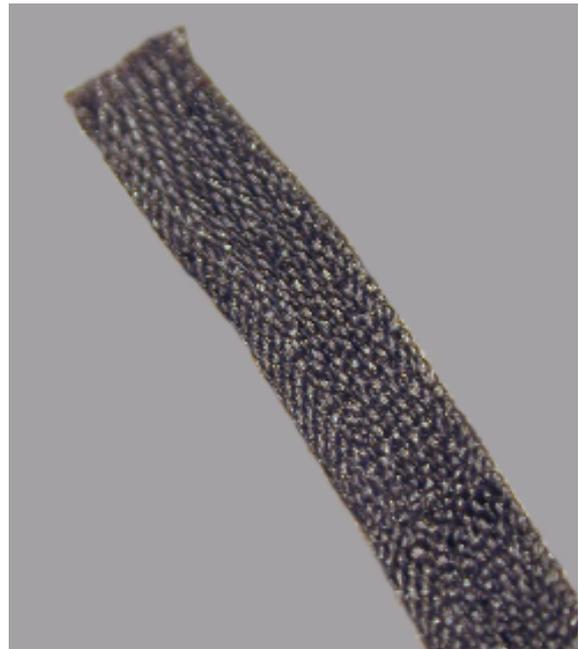
Bobbinet has a definite lengthwise and crosswise grain, and I will discuss later in the text how to best exploit this for a strapless garment.

This usually comes in white, black, ivory, and sometimes beige.



ORGANZA, OR TWILL TAPE:

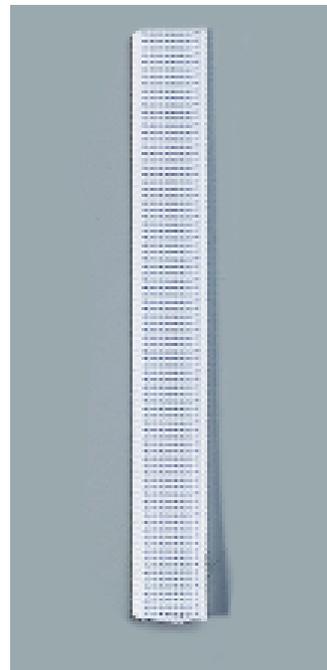
You will need to “stay” the topline of the garment to prevent stretching. You can use twill tape, which is what most people do. Another option is to use a double-thickness of silk organza, torn on the lengthwise grain. I like this better, as there is less bulk in the seam when you are finished. The photo to the right is twill tape.



BONING:

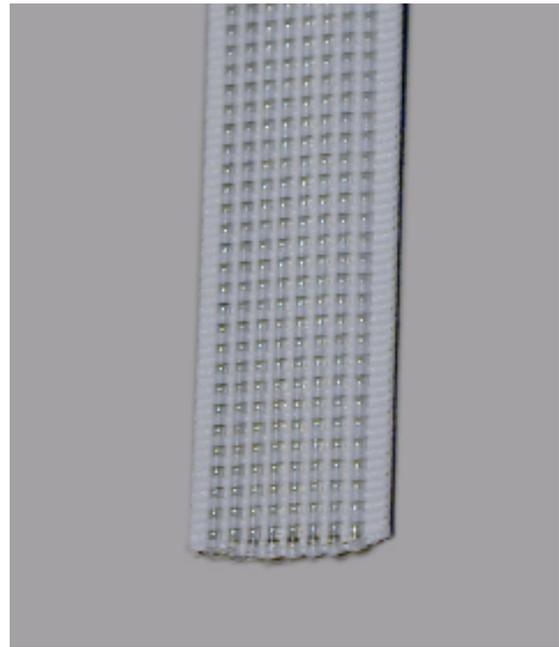
I use Rigilene brand Webbed Boning in this method. It's called webbed boning, because it is made of lengthwise plastic rods that are woven together. Visualize a long, narrow fabric, and that's what you have. It comes in white and black.

There are two widths, but I like the wide one (which is about 1/2 inch or 12-14mm wide). The beauty of this product is that you can sew right through the bone. This distributes the stress of the garment all along the length of the bone. Bones in a casing hold the stress at two points—each end of the bone.



There are drawbacks to the webbed boning. One of them is that you can't run it below the waistline in front (except for small points like in our examples here). If you do, it will eventually collapse from the flexing of the body. If you want to run boning below the waist, bones in a casing are the ticket.

The other drawback, which is easily corrected, is the tendency for the rods to shift over time. You can prevent this by melting the cut ends of the bones over a flame. This seals them together.



BONING IN A CASING:

This is the traditional boning, and comes in different forms. What we're showing here is the off-the-shelf boning that you buy by the yard. It comes with its own casing, and comes in black or white.



The photos here show the boning as it comes off the bolt, and the second shows the plastic inside the boning.

There are other types, in white steel, spiral spring steel, and other variations. I don't use them much, unless I need to really control a figure. These bones require that you make your own casing for them.

The white steel boning looks like this—it's coated with white, and the ends are dipped into a thick layer of epoxy or other coating, to take the edge off the steel. These examples were recovered from old vintage corsets I came across.



BUSKS:

The device pictured below is called a busk. It's normally used to fasten the fronts of corsets (this example came from one of the vintage corsets I picked apart). When using a busk, which usually goes in front, you don't have to add any extensions in your pattern. The busk makes the garment fasten exactly at the center front.

Also, generally if there is a busk in front, there are lacings in the back. The process is to fasten the busk, and then tighten the lacings.

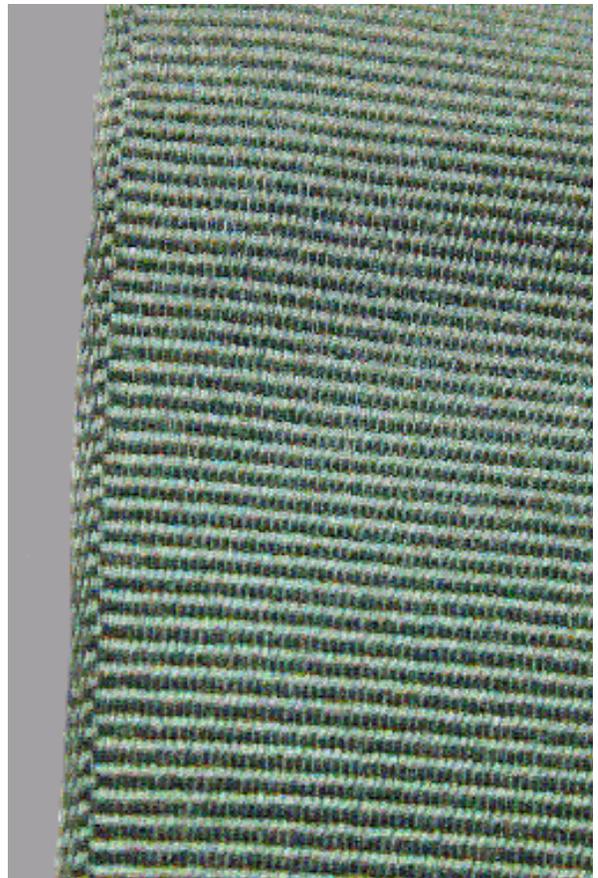


They fasten with a key-lock sort of device, as you can see better with the busk open.



WOVEN-EDGE GROSGRAIN RIBBON:

The foundation of the strapless garment is the waist stay. For this I like to use a woven-edge, grosgrain ribbon, usually 1 inch-1 1/4 inch (23mm-30mm). The woven edge keeps this ribbon from stretching, and the grosgrain weave keeps it flat inside the garment over time. Fiber content isn't important, and polyester is not a dirty word here.



HEAVY HOOK-AND-EYE SET:

This is the hook and eye you will need if you are making a high faced waistband, or if you are fastening the top of a net bustier. It is a heavier metal set than what you normally find at the notions counter, but see the list of resources on the next page for where to get these. These normally come in black, but I've seen silver as well.



SKIRT HOOKS AND EYES:

Use these to fasten the waistbands on a net bustier, or when the waistband comes through the foundation layer. They come in silver and black.



RESOURCES:

The following are places to find these resources, as of May of 2004. It is by no means exhaustive, but this list will get you what you need.

As far as fabrics are concerned, the twill fabric can be got about anywhere. However, I encourage you to support your local fabric store, instead of the national chains. If you purchase locally, you may pay a little more but you will build a relationship with the retailer, and they will oftentimes be able to find you things you might not otherwise obtain on your own. Also, you are more likely to encounter someone who knows what you are asking for in a local shop.

LACIS: 2982 Adeline Ave., Berkeley, CA 94701. Phone (510)843-7178. They have all sorts of boning, bobbinet, busks, laces--it's a wonderful resource!

ATLANTA THREAD AND SUPPLY COMPANY: This is an all-around good catalog to find many of your sewing supplies. They have the raglan shoulder pads I talk about, plus hooks and eyes, zippers, and a lot of other things. Call 1-800-847-1001 for a catalog.

SOLO FASTENERS: A really good resource for zippers, as well as other fasteners. They also have boning, and bust pads, and twill tape. Call 1-800-343-9670 for a catalog, or go online to www.soloslide.com

GREENBERG AND HAMMER: This is a good resource for the boning, hooks and eyes, ribbons, and a whole lot of cool stuff. Their tracing carbon is the absolute best, and comes in really large sheets (about 24"x30") in four different colors—red, blue, white, and yellow. Call 212-246-2467 for the catalog, or go online to www.greenberg-hammer.com

B & J FABRICS: This is my source for cotton tulle (bobbinette). They have it in the three colors, white, beige, and black, and the price isn't unreasonable. They are at 525 Seventh Ave, 2nd Floor, New York, NY and the phone is 212-354-8150.

FASHION COMPANY: The Fashion Company is one of my favorites, from my San Francisco days. They have the woven-edge ribbons, and bonings, as well as a lot of other things like trims, braids, beads, beaded appliqués, you name it! If they don't have it they take it as a source of pride to find it for you. You will ask for Tasia or Michael. They can be reached in San Francisco at 415-626-5641.

FARTHINGALES: This is a supplier for costume and corset supplies, like the different types of boning, busks, hoop steel, and the like. They are in Canada, phone 519-275-2374, and their web site is www.farthingales.on.ca

Construction:

We will be covering, step by step, the process of building a bustier with two different sets of examples, which I will insert into the text as running “parallel” with each other.

This photo is of the bustier I made for Jennifer. (Isn't she beautiful? You remember her from earlier.) This bustier I made from her moulage, and photographed as I was making it, so I could show the process in an actual garment. The fabrics were an emerald green crushed taffeta on the outside, with a black heavy crepe lining.

The other photos are of a set of teaching samples I use for teaching this material as a class. (You will see the notes I write on the samples in pen.)

Some notes on the photos: I took slides of these before the days of digital cameras. Therefore they will be a bit small, as I had to scan them from the slides. When viewing in Adobe Acrobat Reader, under the “VIEW” menu, select “Fit Width”. This will make the images larger so you can see more detail.

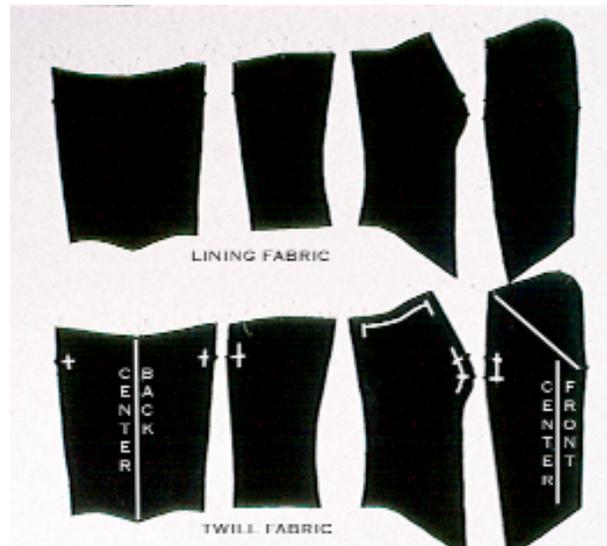
In this set of samples, the dark pink fabric is the lining fabric, and the light pink fabric is the outer layer.



Cutting out:

We will cover, step, by step, my construction of a strapless garment. To begin, we will show the pieces cut out of the respective fabrics.

This photo shows the foundation layer for this garment. It consists of the lining fabric on top, and the twill fabric underneath. Note the markings are on the twill fabric, not the lining fabric. This is because you will lay the two layers on top of each other, pin-or thread-baste, and then treat the two as one layer. (This is also called “underlining”. I use the terms interchangeably.)



When cutting the twill fabric, you want to cut it with the waistline running parallel with the lengthwise grain. This is because the lengthwise grain has less stretch than the crosswise grain. Less stretch on the lengthwise grain makes the foundation more secure—it won't get larger over time.

As you remember from our discussion of fabrics, the twill fabric has NOT BEEN PRE-SHRUNK! Pre-shrinking puts stretch into the fabric, and you DON'T want this!

On this garment, I chose to install a bone at the center back as well. Since there is no center back seam to stitch it to, I machine stitched it to the back center panel in the twill fabric BEFORE I laid the lining fabric over the twill fabric. If you feel you want more boning than there are seams in the design, this is an option,

In this photo, you see the foundation layer from the inside. There is a layer of twill for interlining, and a layer of lining.



In this photo, the beige fabric is the twill, and the dark pink is the lining fabric.



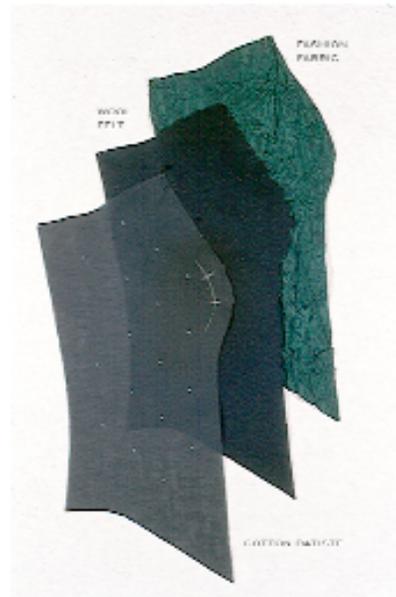
You can see, marked on the beige twill, is the lengthwise grain of the fabric. It is parallel to the waist line.



To cut the outer layers, we cut the fashion fabric, and an interlining.

For the green bustier, I am using an emerald green crushed taffeta, underlined with a black wool felt. The third layer underneath the wool felt is black cotton batiste.

The batiste is used only because the crushed taffeta has too much stretch, and would get baggy over time. (Later on I will be using beads to quilt the three layers together.)



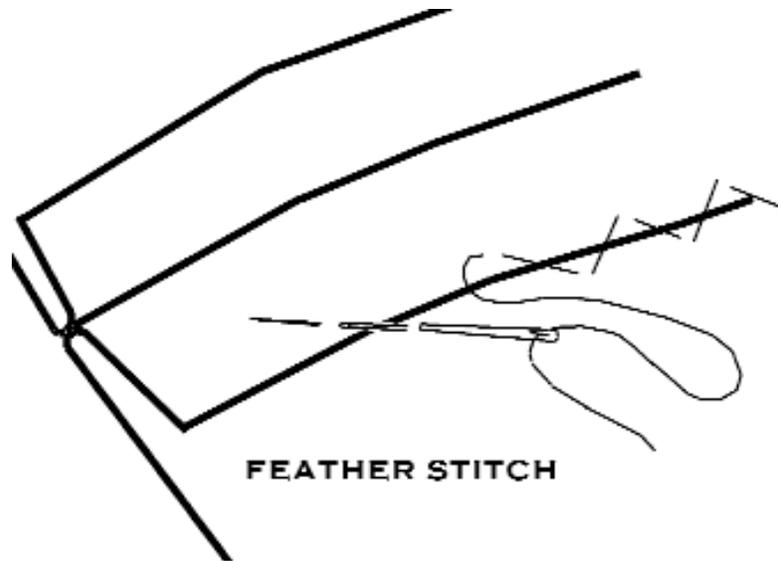
On the pink samples, we see the outer layers constructed. We cut those layers out of the pink fashion fabric, and a layer of wool felt. The seams are sewn and the felt is graded to 1/8 inch (3mm).



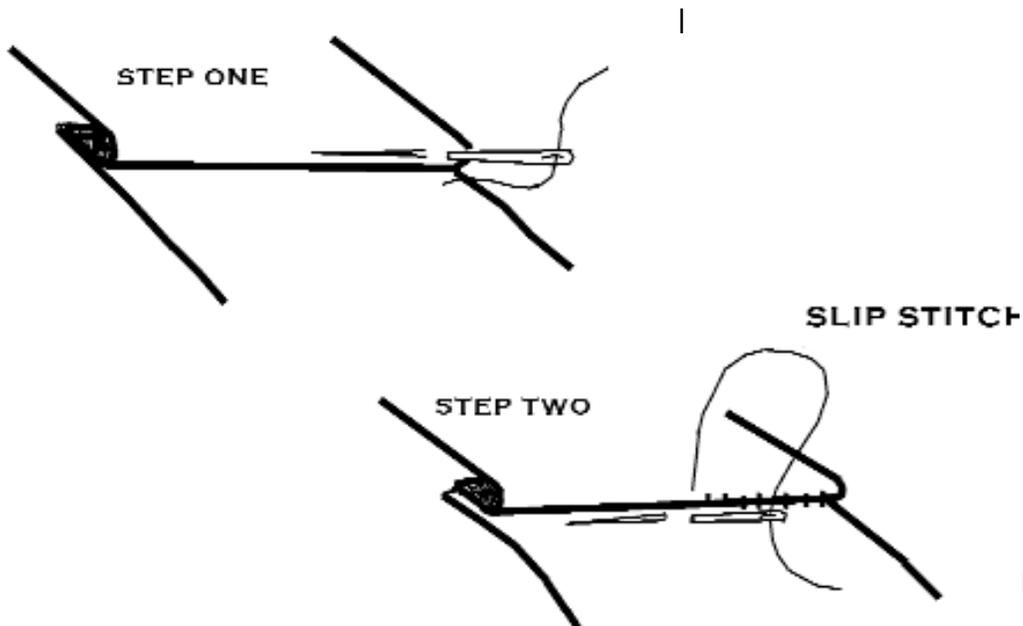
CONSTRUCTING:

You will need a couple of definitions before you begin. They are:

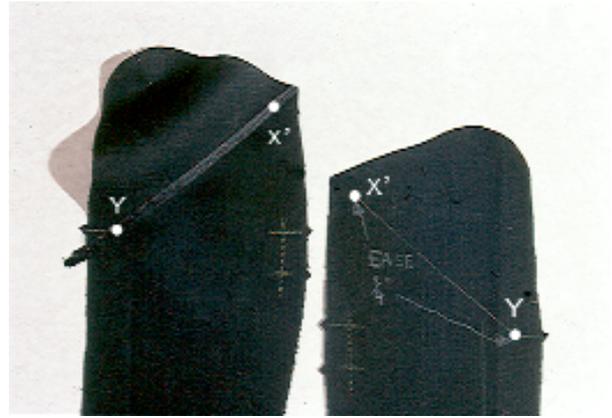
Feather stitch (also called "slant hemming"): This hand stitch will be used to hold down the seam allowances against the fabrics. These stitches are somewhat long (1 inch, or 2.5cm works well here), and done very fast. Don't sweat about even stitch length here, as these will be hidden inside the garment.



Slip Stitch: Another hand stitch that is used to close the garment after turning it right side out. These stitches are shorter, about 1/4" (6mm) long at the longest. When I close a garment with this stitch, I use a double thread, knotted at the end. This gives the seam more strength.



Before you sew the foundation layers together, you want to ease the toplines. On the center front panel, you will ease 1/4 inch (6mm) from point Y at the center front, to point X' at the princess seam. Stitch this to stay tape just inside the seam line.



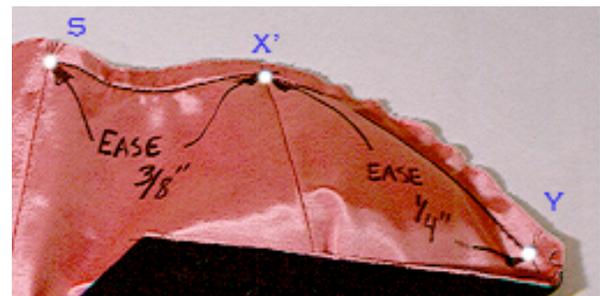
On the side front panel you will ease the seam from point X' to point S by 3/8 inch (9mm). Stitch this to stay tape just inside the seam line.



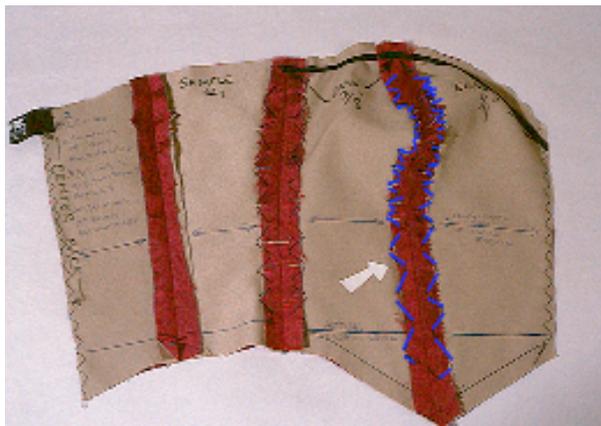
We see the same thing here on the teaching sample. The stay tape is black twill tape.



On the outer layers, you want to ease the same seams—the same amounts—as you did on the foundation layers. You only have to stay-stitch the outer layers after easing—they will eventually join the foundation layer, which has the stay tape.



You can now sew your vertical seams of the foundation pieces together. Once you have done that, press the seams open. Do not grade these seams—keep the full seam allowances here.



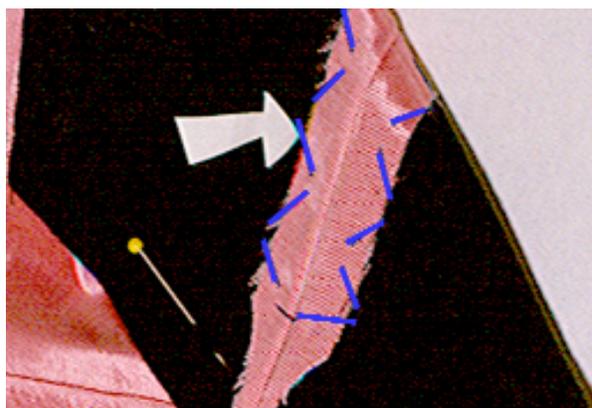
Feather-stitch the seam allowances here.



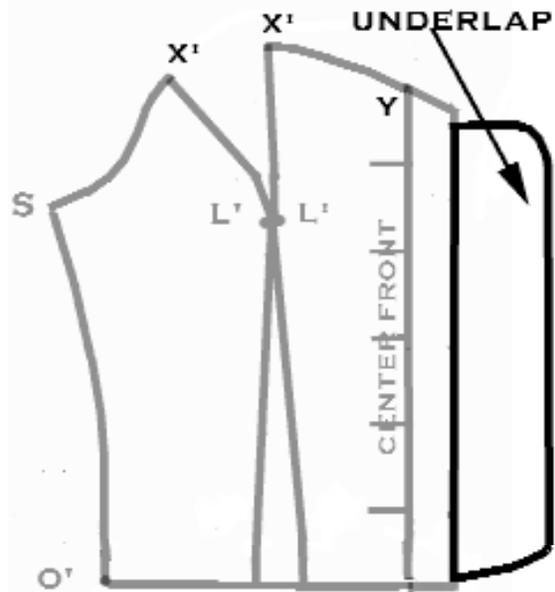
Also, sew the vertical seams on the outer layer pieces. Grade your seams to 1/8" (3mm). Press the seams open.



Feather-stitch down the seam allowances on the outer layers as well.



If you have made a separate underlap piece, now is the time to install it on the appropriate side of the center opening.



Next, if you desire piping in the seams, you will hand-baste it onto the foundation piece, and afterwards machine-baste it with the zipper foot in position #2.

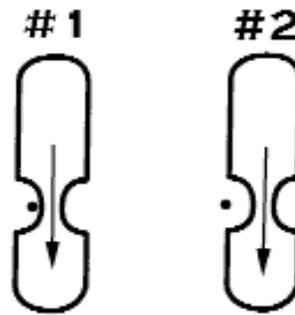
In this example, I installed it all the way around the foundation, joining the ends at the center back at the waist



This is the generic adjustable zipper foot. They fit most machines, and can be had for not much money at any sewing machine store. I use this for a lot of things, and will refer to "position #1 and position #2. So, a little explaining is in order here.

The illustration to the right is a simplified drawing of the different positions of the generic adjustable zipper foot.

Know that, when I use the terms #1 and #2, these don't refer to a machine setting per se, but to the relationship of the needle to the foot. This is achieved by adjusting the foot, as well as moving the needle position.



When using this foot, *make sure the foot itself sits on a feed dog.* Otherwise, the work won't move smoothly through the machine. Once you have the foot on the feed dog, adjust the needle position, and then the foot itself to get the proper position.

When machine-basting in piping, on anything that is not a final seam, use position #1, which has the needle as close in to the foot as possible. This allows a little slack in the piping.

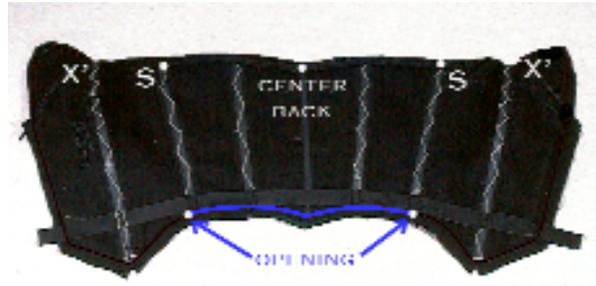
For the final seam, position #2 puts the needle right at the *very edge* of the foot. When stitching piping, this will snug-up the slack, and put all the previous seam lines into the seam allowance.

In the rest of the text, when I refer to position #1 or #2, this is what I will be referring to.

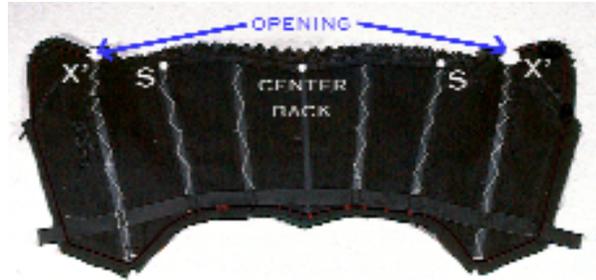
This is the time to think about where you will be turning the garment, after the final sewing. In a strapless garment, turning the work right-side-out can be quite a chore, somewhat like turning a cardboard box inside out. I like to make a large opening, so turning is easier.

There are two good places to leave the opening. First, is at the back waist, between the side seams. I choose this option when I want the topline to have a clean edge (piping or not), with no sort of trim or pleated edge. Putting the opening at the back on the waist, puts it out of the line of sight, so any hand stitching used to close the garment will not be readily apparent.

Note: We will cover this variation later, after we cover the basic construction. The samples show construction with the opening on the topline, which will be discussed next.



In the green bustier, as well as the pink sample, the upper edge between the points X', is where I chose to put the opening.



The white arrows show where I chose to leave this piece open to turn later. In both cases, I used a decorative element (pleated ruffle or knife-pleats) as a disguise to hide the hand stitching needed to close this opening.



You will stitch the ruffle, between points X' with the foot in position #2, final seam. In this photo, you can see that the final row of machine stitching falls closer to the body of the piece—this makes all the previous basting fall in the seam allowance.



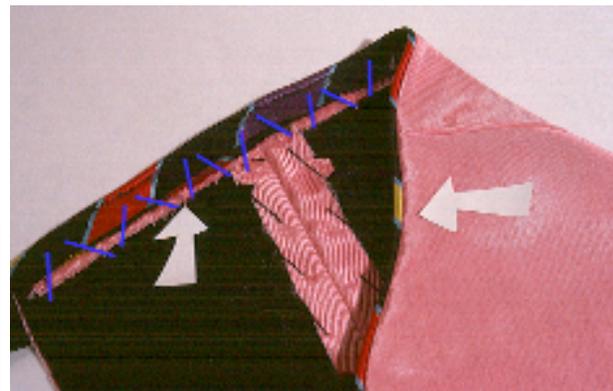
When doing that, I also put a piping onto the outer layer, between points X'. This makes it so, when the garment is done, there is a piping on each side of the pleated edge.



This is done more for construction reasons than aesthetics—you can hide hand stitching in a piping much easier than in a folded edge.

You will sew the piping on with a “final seam” (position #2,).

Press the seam allowances back along the piping, and feather-stitch in place.



With the piping in place, we are now ready to install the boning.

As you read before in the materials section, I like to use the 1/2 inch (12-14mm) wide, Rigiilene brand webbed boning for most bustiers. I like it because you can stitch right through the middle, which holds the garment all along the seam, instead of boning in a casing that holds the garment at the two endpoints of the bone. Bones in a casing have their uses, though.

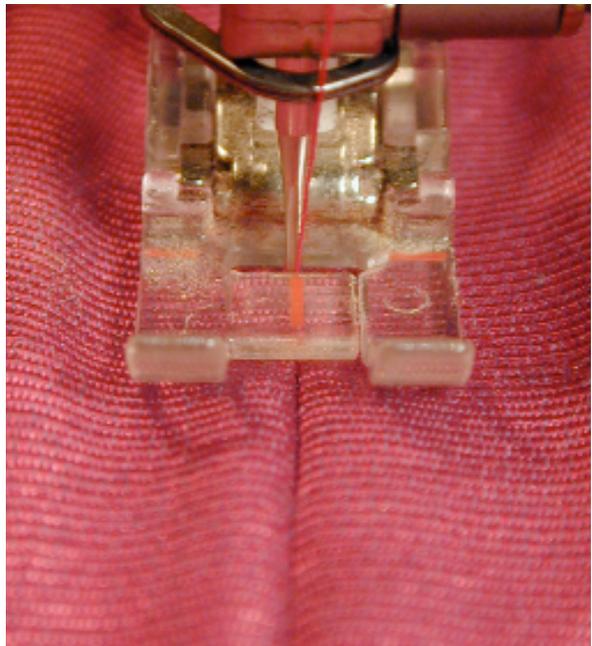
When you cut the boning, cut it 1/8 inch (3mm) shy of the seamlines, or a total of 1/4 inch (6mm) shorter than the finished seam. Running the bone right to the seam will cause the topline to rise where the bones are.

Burn the ends of the bones with a match, to melt and seal the plastic rods together. (You saw that also in the materials section.) Just cutting them, without melting them together, will make the rods shift over time, popping through the fabric.

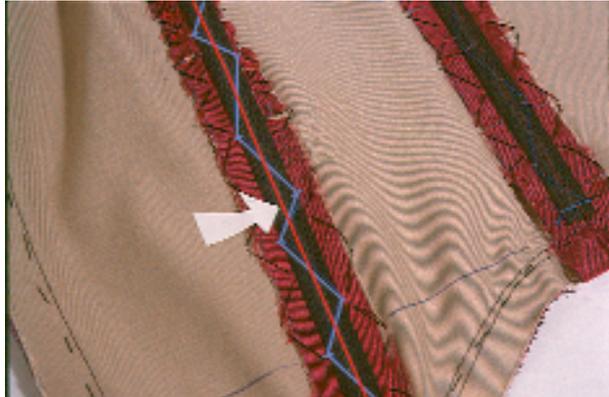
Center the bone along the seams of the foundation, and thread-baste in a zig-zag pattern, as shown in blue, in the photo. This keeps the bones in position for stitching, and also keeps them flat against the seam allowances.



Now, with a jeans needle in your sewing machine, from the right (lining) side, stitch-in-the-ditch, through all layers including the bones.



This is represented by the red line in the photo.



I like to baste all the bones in first, and then machine stitch all the bones.



You now see both examples, with the boning installed.

ONE DART BODICE:

Let's digress a moment, and talk about the construction of the one-dart bodice.

As you know from drafting the pattern, there is no princess seam on the one-dart bodice front. So, in this case, we need to treat the boning (as well as the waistband in the next step) differently.

Now, notice in the photo how we run the boning diagonally from the waist to center front, and from waist to side? I like to stitch these bones on the twill layer *before* placing the lining fabric over it, so the machine stitching won't show through to the lining. Also, the three short pieces of boning go onto the twill at the same time. These three short bones support the curve of the topline, so it stays flat against the chest.

Referring again to the photo, after sewing the seams on the foundation layer, we have installed a bone on the waist dart. This bone ends at the base of the bust (where the breast joins the rib cage). In this instance we won't go over the bust itself.



Below the bust, between the diagonal bones, you can now attach grosgrain ribbon, or firm elastic, as shown. This keeps the breast from slipping downward—the whole arrangement functions somewhat like an underwire, but (I'm told as I don't have the "equipment" to test these out myself) it's more comfortable than an underwire.

BACK TO THE STORY:

Once the boning is in, we add the waist stay. The waist stay is the woven-edge grosgrain ribbon. Cut this ribbon $3/4"$ (1.8cm) shorter than the actual waist on the foundation. You want this to be smaller, so it will grip the waist securely. When it grips, the garment won't turn or shift.



If you have a garment that travels below the waist (or in this case, only parts of it travel below) you will put the lower edge of the ribbon along the actual waistline.



As you can see from the photos, the waist stay is attached only to the bones.



When positioning it, you will distribute the extra length of the foundation layer along the bones. You will see the excess better in this photo.



ANOTHER DIGRESSION:

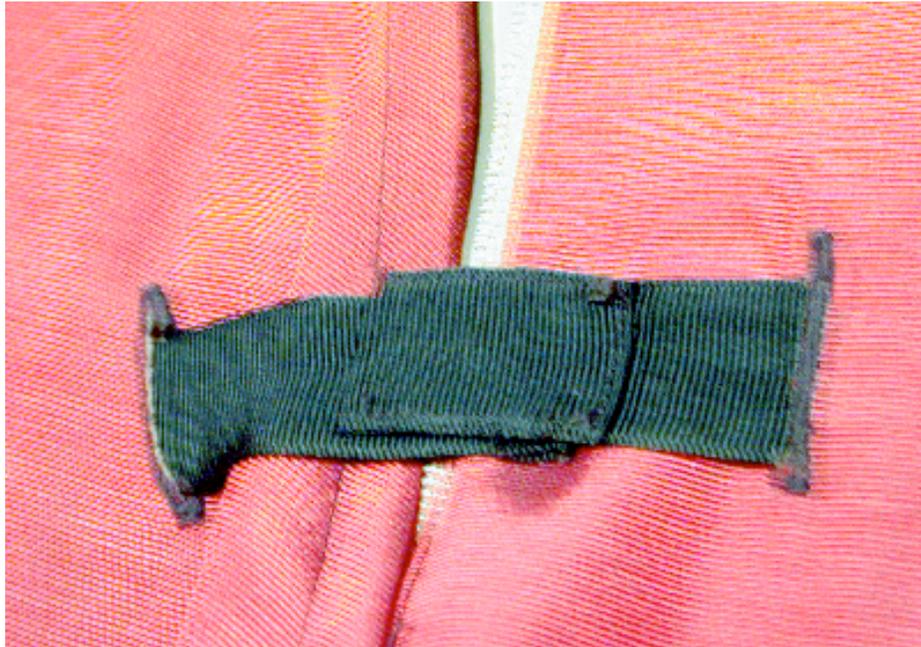
There will be times when you will want a zipper opening as opposed to a button opening. In cases like these, you will not want the waist stay to be attached in the same seam as the zipper.

Doing so will put too much strain on that particular portion of the zipper. You will make a set of buttonholes in the foundation layer. The waistband will be in two pieces, with hook and eyes to fasten it closed.



When you put on the garment, you will first secure the waistband. Then you will zip up the garment.





This photo shows what it looks like from the inside (lining side) of the foundation layer. The waistband is hooked in this photo.



In this photo the waistband is open (unhooked).



This photo shows what the piece looks like, looking from the twill side (back side) of the foundation layer.

BACK AGAIN TO THE STORY...

At this point in these examples, I installed the pleated edging on the foundation layer. Starting at point Y at the center front, the edging extends over point X', past point S, and to the center back, back to S, to X', ending at point Y at the opposite center front.



First, thread-baste the edging in place, and then machine stitch it. You will stitch it in "position #2".



Between points X', you will press the seam allowance back against the piping, which will make the pleated edging stand up.



Feather-stitch the seam allowances down to the twill fabric as shown.



Feather stitching is represented in blue here.



At this point the fun happens!

For the emerald green bustier, I added the all-over pattern of beads to the body to quilt the layers of fabric together. Then, I embellished the dip at the center back.



This is a close-up of the center back embellishment.



On the foundation layer, I embellished the “lapels” to match the center back. These, as you saw in the photo, turned out over the topline of the garment.



NOW WE'RE READY FOR FINAL ASSEMBLY!

Put the foundation layer and outer layer together, right sides together. Pin them in place, and thread-baste. (I like to thread baste here, because I don't like dealing with pins when I'm doing the final sewing.



A tip here:

For basting, use the same color thread as you have in the machine. This way, you don't have to pick out the basting thread after you machine sew. Know that this is regarded as a “low-brow” thing to do, but I've seen it done inside some really fancy garments. Besides, if someone can see that you did this (which they won't because it is inside the garment), they are WAY TOO CLOSE.

Now, stitch the final seam (position #2) starting at X', traveling along the red line shown in the photo, and ending at the opposite point X'.

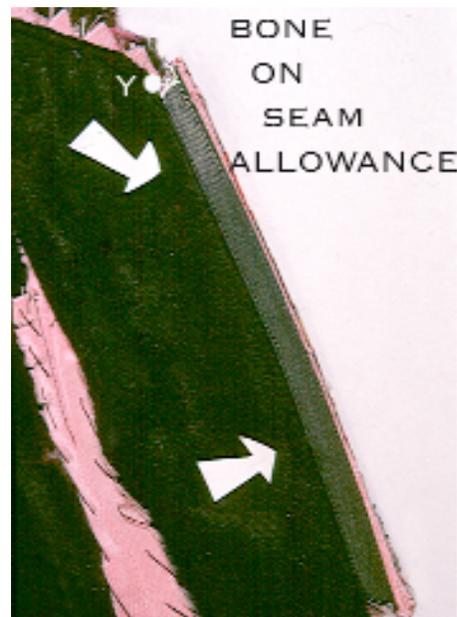


Clip your curves and corners, and grade your seams as you usually would. The felt is graded at 1/8" (3mm).

Then, before you turn the piece right-side-out, you will attach more Rigilene Boning to the front seam allowances. When doing this, make sure the edge of the bone is right on the stitching line, and stitch two or three rows down the length of the bone.



Here's a detail shot of that...



This is what it looks like on the emerald green bustier...

We do this in cases where there is a button front opening. This will provide reinforcement for a straight line along the front edge. On one side the buttonholes will end at the edge of the bone. On the opposite edge, the buttons will stitch through the bone. You will have two bones sitting on top of each other at the center of the garment.

Now, turn the garment right-side-out. And press.

When pressing, I recommend two things:

Press over a ham! Remember when you built in the extra circumference on the upper layer pattern? When you press, press it on the ham so that the upper layer will be on the outside, just as it will be in wearing. If you don't, you will get ripples along the seams.

The photo above right, showing the bustier flat on the table, shows the extra you built in to the upper layer, shown by the light shading under the piping.

Now the piece is draped over a ham, in the curve shape of the body—see how the extra goes away?



We now want to hand-stitch the rest of the piece to finish it. You will press the bustier in a curve over the ham, and pin the upper and foundation layers together between points X' and X', while still on the ham.

When they are pinned it will look like this:

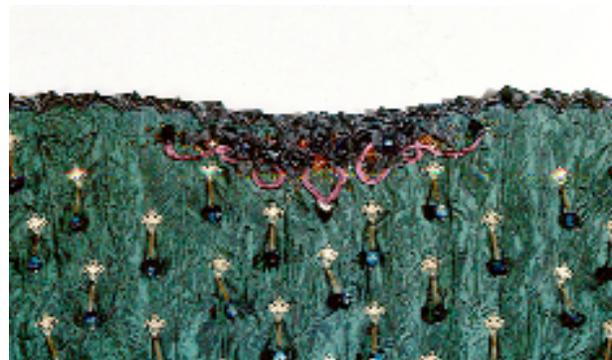


Using a slip-stitch, you will stitch the upper layer to the foundation layer, between points X' and X'. Having the piping there will hide the hand stitches.

In the emerald green bustier, I then pinned the pleats down over the piping on the seam I just hand-sewed.



I then stitched each one down with a bead. This performed two functions: it really hid the hand-stitches, and looks really cool.

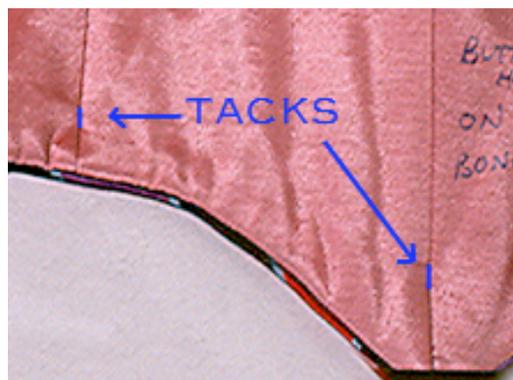


Once this is finished, you will need to tack the ends of the bones, through all layers. This is a hand stitch.

The beauty of using Rigilene webbed boning is that you can stitch through the bones. When making the tacks, you will stitch in the ditch, through all layers—foundation, upper, and bones.



Here's a detail shot:



If you don't do this, over time, the foundation layer will slide up, and eventually roll out over the upper layer. Tacking the ends of the bones will prevent the shifting that otherwise will occur.

Once the tacking is done, you will want to finish with buttonholes and buttons.

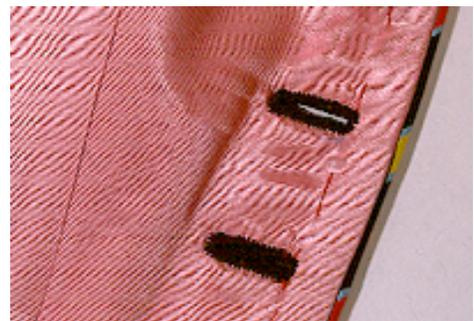
First, baste along the edge of the bones you installed on the center opening seam allowances. This is represented in blue here.



This is what the emerald green bustie looks like:



On the buttonhole side, put the buttonholes in so the ends butt up against the edge of the bones.



This is what the emerald green bustier looks like with the buttonholes in. The red basting is the edge of the bone.



On the button side, stitch the buttons so they catch the edge of the bone, as well as the fashion fabric.



This is the emerald green bustier-- again, the red basting shows where the edge of the bone is.

You can also get a good look at the underlap piece here...



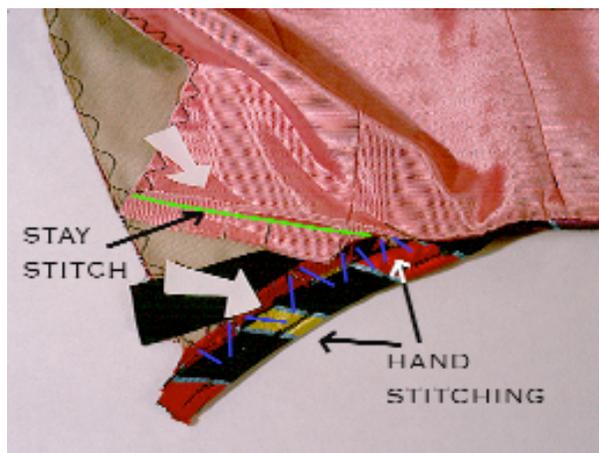
When the turning opening is on the waist:

This variation of construction is almost the same as outlined above. The difference here is treating the opening when it is on the waist.

In this illustration, the red line shows where the bustier will be left open for turning.



As before, the piping will be installed onto the foundation layer, all the way around. Between the points where the garment will close (the red line above), you will stitch the piping with the foot in position #2 (final seam), and press the seam allowance back against the piping. Feather-stitch this into place (the blue lines in the photo).



There will be no corresponding piping on the opening for the outer layers, just a stay-stitch that is 1/8 inch (3mm) inside the seam allowance. This is represented by the bright green line in the photo.

On the outer layer, grade the felt to 1/8 inch (3mm), and press the seam allowance over, making the fold 1/8 inch (3mm) to the other side of the stay stitching.



Finally, you will pin these layers together, and slip-stitch the outer layer to the foundation layer, along the piping.



SPECIAL CASES:

In this section we will deal with enhancing the bust, and how to adapt this theory to high-waisted skirts or trousers.

ENHANCING THE BUST:

There are situations where the line of the garment will be improved with a little more fullness at the bust. I don't recommend padding a bust out beyond believability (such as turning an A cup into a D cup), but a little enhancement is not bad or dishonest, in order to get the right silhouette.

In the black bustier on Shelley, the intent of the design was to create somewhat of an hourglass silhouette. (For the record, since Shelley has a bust, we didn't have to resort to any enhancement here.)

However, I had one customer who really liked this style, but had a relatively flat bust. So, for her, I added some volume in the bust, to maintain the silhouette. She was delighted, because I enhanced the bust but didn't give her a "shelf", which she was concerned about.

The comments she heard when she wore it out, were "You look well in this", not "WHAT HAPPENED!?!"



When I enhance a bust, I use raglan sleeve shoulder pads. (My friend Mary calls them “petals”, as in “I’ll put some petals into that bodice for you.” Sort-of like visions of throwing rose petals at the front of the dress...) We’ll refer to them as “petals” here as well.

Raglan pads are sort-of breast-shaped, easily found in most notions departments, and are ready to use. You can also choose from the various sizes, depending on the amount of fullness to be added.

The only ones to avoid, though, are the foam rubber ones. Foam rubber doesn’t stand dry cleaning well. If you’ve ever opened up a garment that has old foam rubber shoulder pads (and has been dry cleaned), it’s an absolute nasty mess! The pads eventually crumble and turn into a vile sort of reddish-colored dirt. The kind of pads you want to use are the fiber-filled ones, either cotton, or (my preference) polyester batting.

There are also bust pads on the market that are made specifically for this purpose, if you don’t want to use a raglan pad. A good source for those is at Greenberg and Hammer in New York. (www.greenberg-hammer.com)

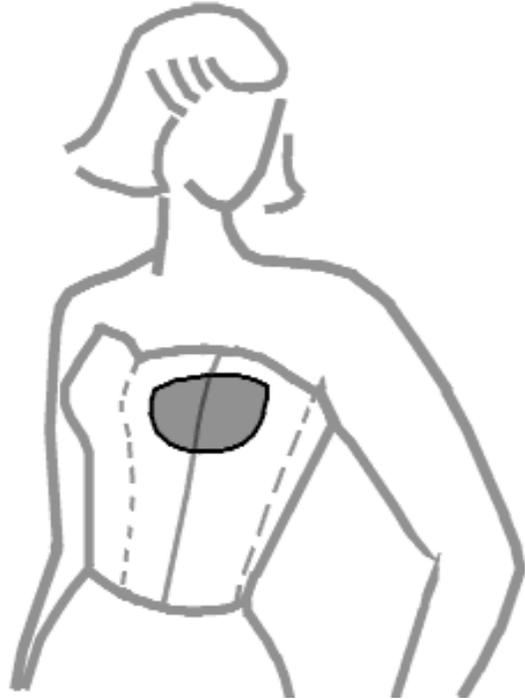
When you are drawing the design for the topline of the bustier on the moulage muslin, keep in mind here that *you don’t want people looking down into the garment.* I like to have the topline high over the bust (as in the black bustier pictured above), so one cannot look down into the garment.

There’s no delicate way to put this—if one can see down into the bustier (and see the size of the breasts), it will destroy the illusion. *So, make that topline high!* On this bustier, I made a deep V-neck (relative to the topline over the breasts), which creates the optical illusion of showing more without actually **SHOWING** more.

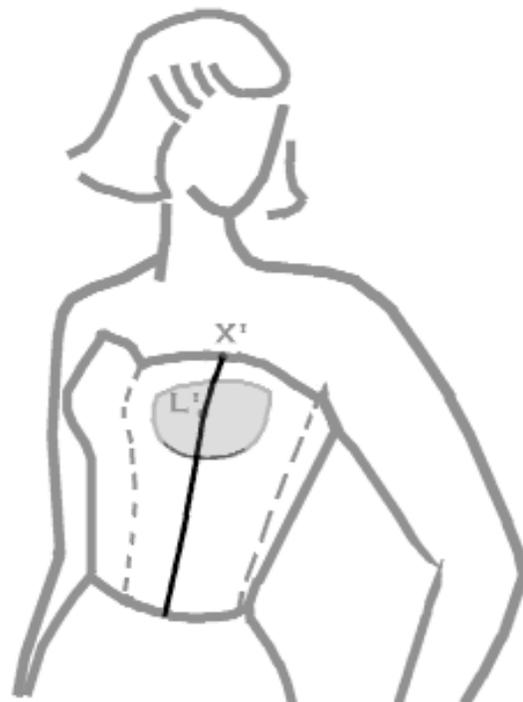


Also keep in mind that the foundation layer has to fit the figure exactly. We are adding the fullness between the foundation layer, and the outer layer here. If the foundation doesn't fit exactly at the bust, it will collapse in wearing.

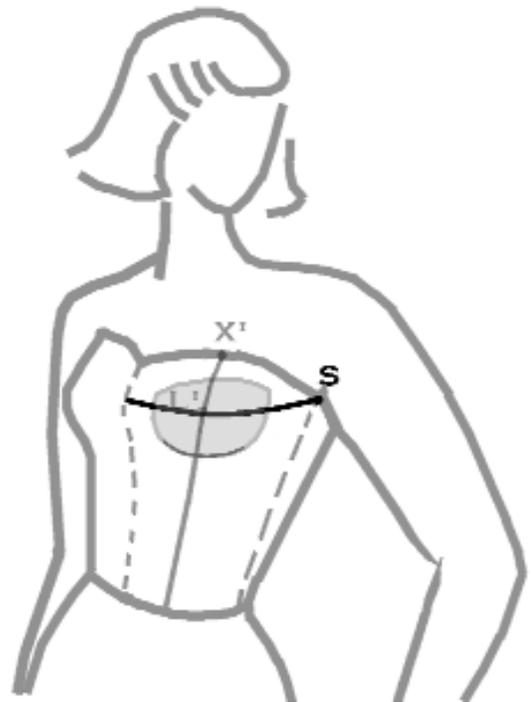
When trying on the test garment, after you have made the adjustments, you will want to place the pads. Placement is done "by eye", and you decide if you want uplift, or width, or cleavage. Attach them in place, and thoroughly mark the test garment and the pads, so you can transfer the marks to the pattern and the garment. This will enable you to position them correctly when constructing the garment.



After the pads are in place, measure the princess seam from point X', passing over the bust point L', to the waist. Note this length.

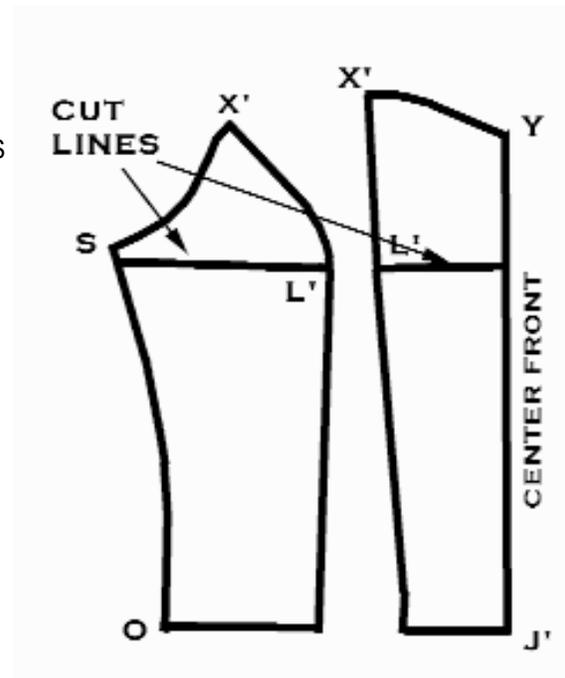


Then, measure the bust parallel to the floor, from the center front, through the bust point L', to point S at the underarm. Note this measurement also. We will call these the "petal measurements".

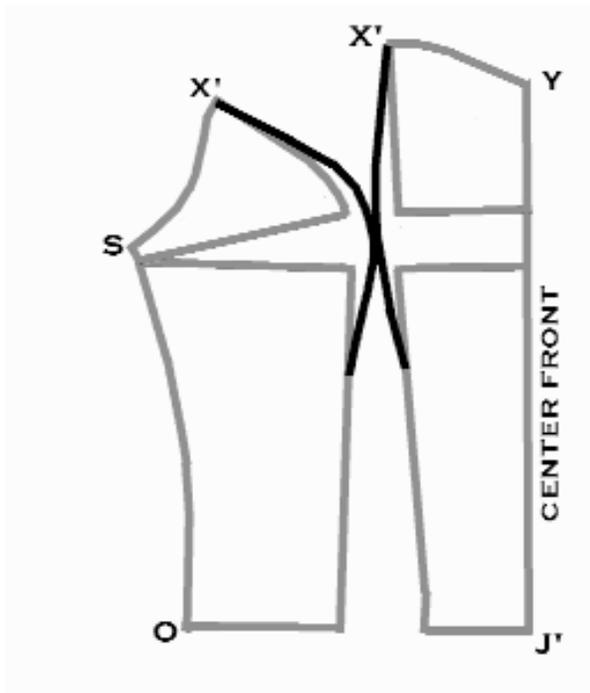
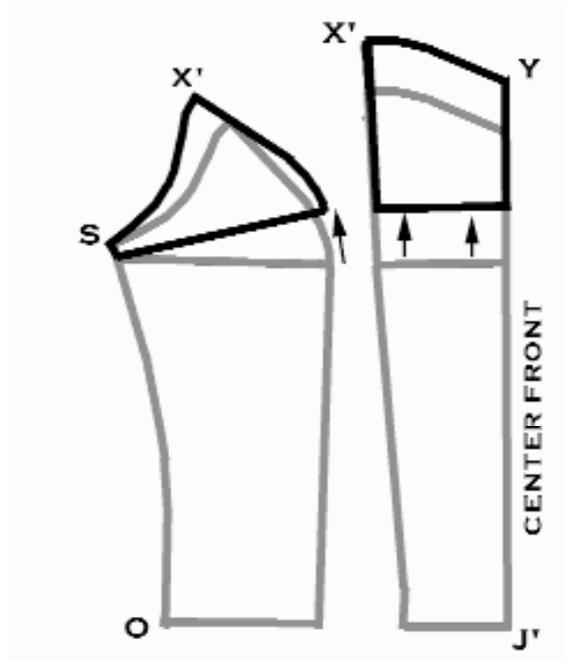


You will use your front outer layer patterns (which have already had the 3/8 inch added) for this step. Subtract the actual measurement of the princess seam (X' to the waist) from the vertical "petal measurement". Note the difference.

The cut line in the diagram also corresponds to the horizontal "petal measurement". Cut both pattern pieces from points L'.



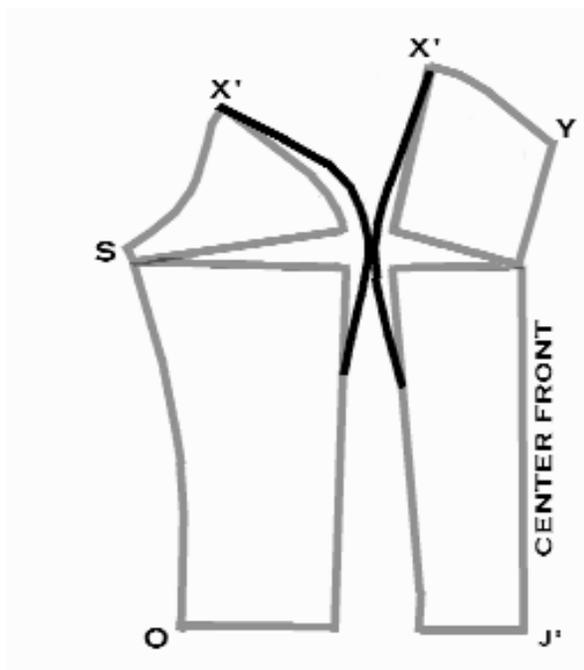
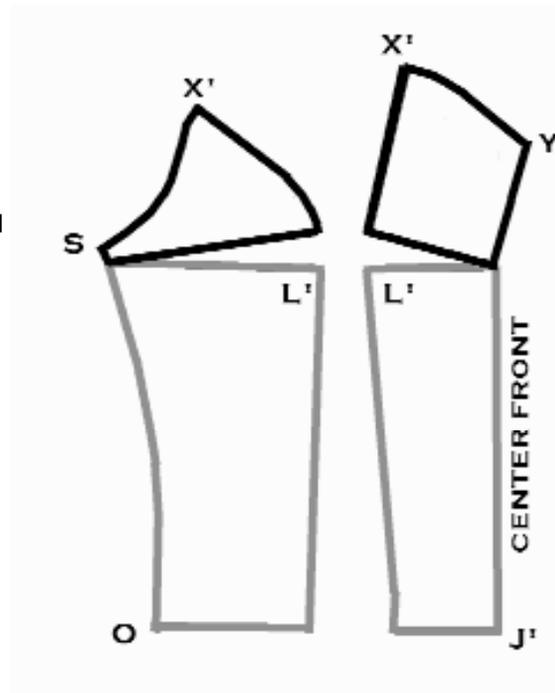
Spread the pattern as shown, when the center front is cut on a fold. The distance spread is the difference between the actual front princess seam measurement, and the vertical "petal measurement"



Now, subtract the actual horizontal measurement across the front pattern piece (through L') from the horizontal "petal measurement". Note that difference as well.

The difference is what you will extend out at the bust (black lines) to create enough width to accommodate the pad. Note how the width is increased on the center front, as well as the side panels? You want to increase the figure width (bust point width). If you don't, the bust will look "cross-eyed".

When making this adjustment on a garment with a center front closure, you will spread as shown.

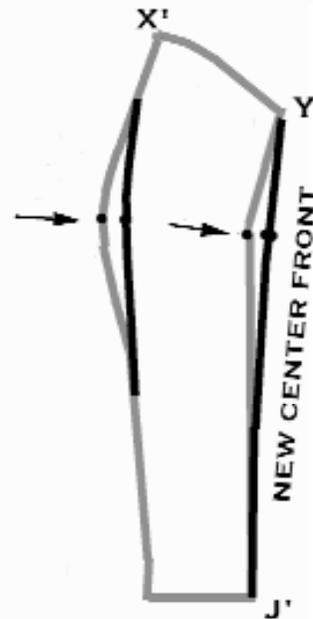


You will increase the width at the bust, as shown here.

Finally, you will true up the center front line. Draw the new line from point Y to point J'. Note the amount you have added to the pattern.

Decrease at the princess seam by the same amount, so the circumferences remain the same. Check your seam lines to make sure they match the center front, and princess side seams respectively.

You will cut out the outer layers now in the fashion fabric and underlining material. Construct them the same as we have outlined above.



In the foundation construction, you will install the boning, piping, and waistband before you place the petals.

You will want to press the edge of the petal, so it is as flat as possible—this will eliminate show-through in the final garment.



You determined the placement earlier, and will now position the petal as marked on your pattern.

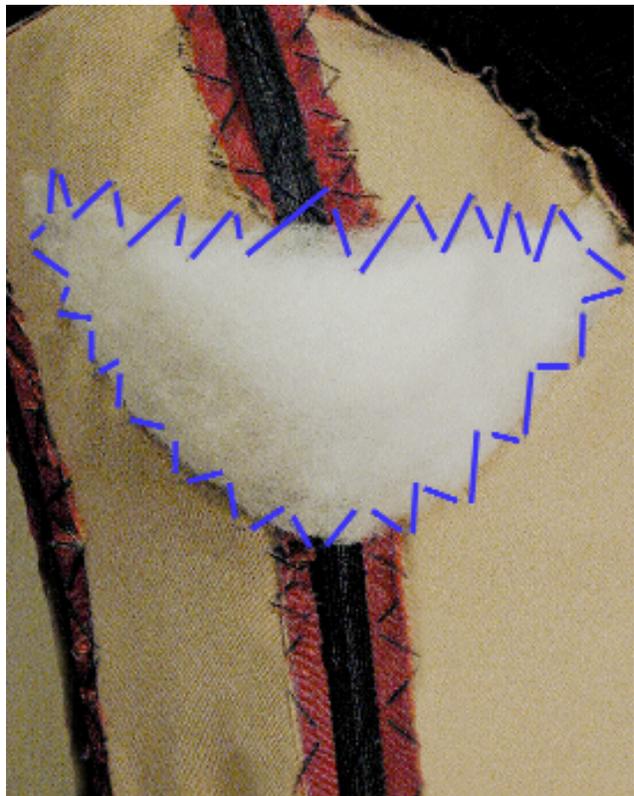
After pinning these in place, you will feather stitch them on by hand. Make sure when you are stitching not to catch the lining fabric—just catch the twill fabric. This way the stitches won't show in the finished garment. You can see the blue thread that is used for the stitching.



This is shown in blue in this photo.

The feather-stitch will flatten the edge of the petal out and hold it flat, so the edge won't curl over time.

By pressing the edge of the petal, and then feather-stitching, you guarantee that nobody will know the bust has been "helped" here.



HIGH-WAISTED TROUSERS AND SKIRTS:

In classes, I sometimes get the question: “Why should I learn how to make a strapless garment? I never wear them!” My answer is always, “High-waisted skirts and trousers.” If you don’t construct them properly, they will fall into a bunch right where the waist bends while you sit, and look terrible when you stand back up.

The beauty of the high-waisted trouser or skirt is the length they give to the leg, enhancing and balancing the figure. I personally have a very long torso and very short legs—I look really well in a high-waisted trouser.

There are really no rules as to how high to make a high waist. I would say that one needs to consider the waist height in relation to the entire outfit, instead of just making a decision by looking at this individual garment.

The high-waisted trouser or skirt is really a very short bustier, one that doesn’t extend all the way over the bust. The principles for supporting these garments are the same, though, so that’s why I’m including them here.



PATTERNWORK:

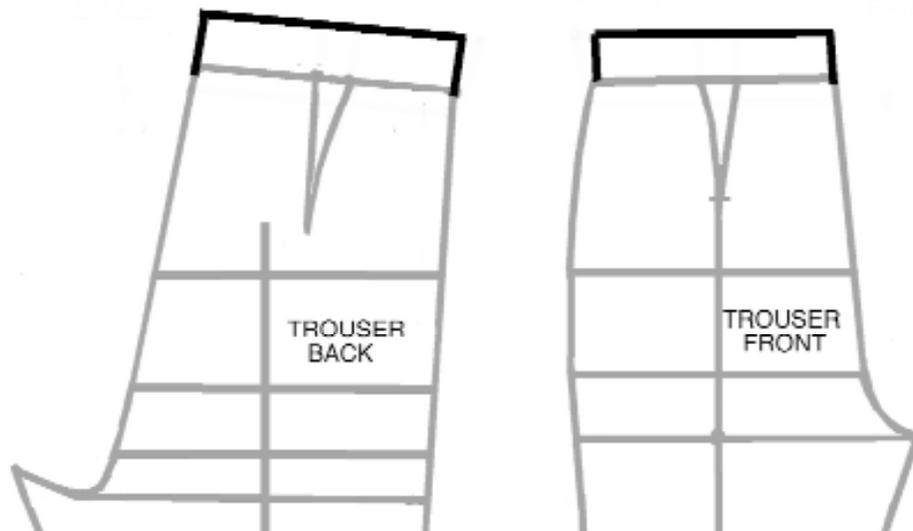
I cover the patternwork in the CD book "Trousers Draft", but for convenience I will repeat it here. The illustrations are the same as I used in the Trousers Draft CD, and the idea works exactly the same when making the skirt.

First, decide how much you want to raise the waist. A rule of thumb here is: 1 1/4 inch (32mm) at the minimum. Depending on height, and the length of your torso, you can go up as much as 3-4 inches (7.5cm +). Since I have such short legs relative to my torso, even though I'm 5'6" (170cm), I can raise the waist a good 3 inches (7.5cm) and still be in proportion.

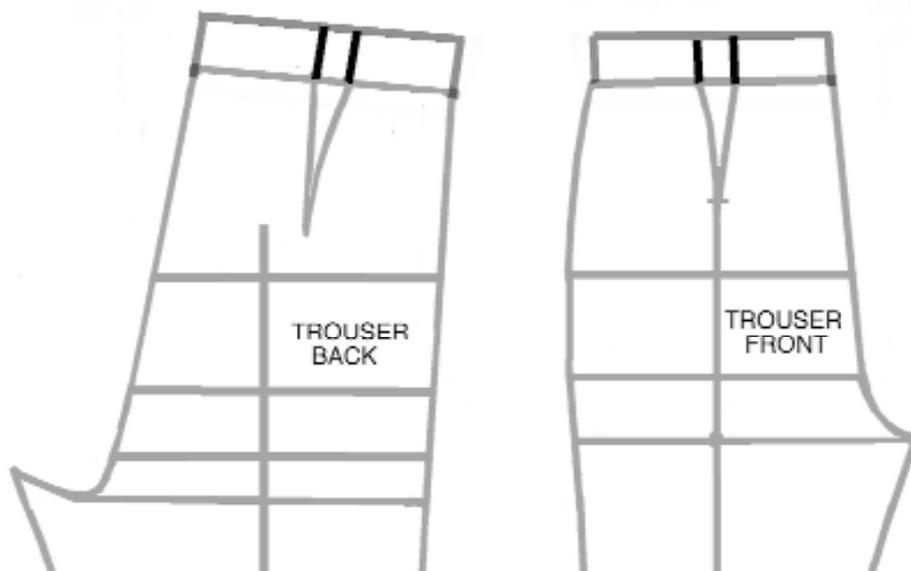


Remember, it's all about proportion here! When deciding, look at the waistline in relation to the entire outfit. Only the eye can determine what's best—if you're unsure, ask someone whose taste you respect.

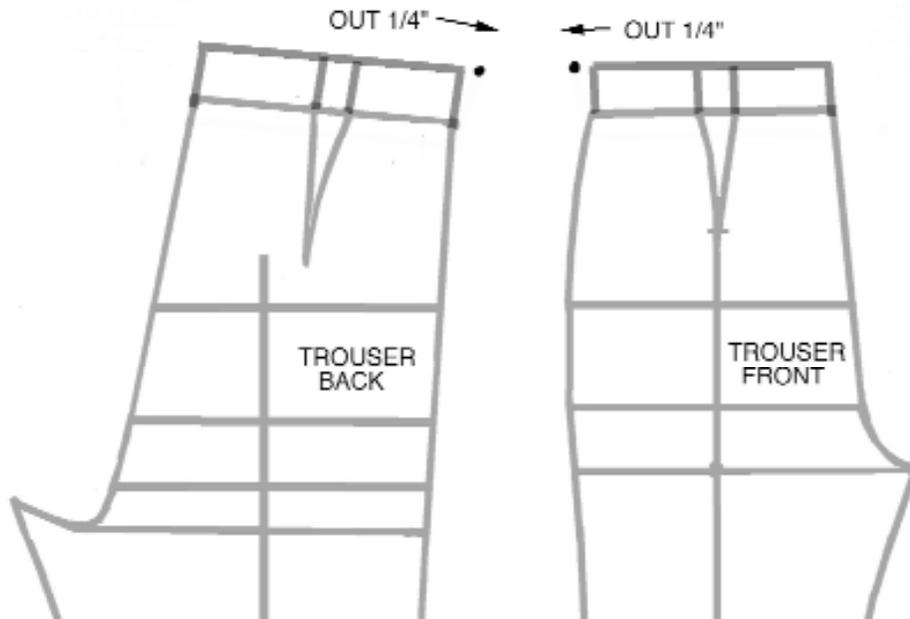
On the front and back, draw a line parallel to the waistline, the distance you wish to raise it. Extend the side and center lines up to meet this new line.



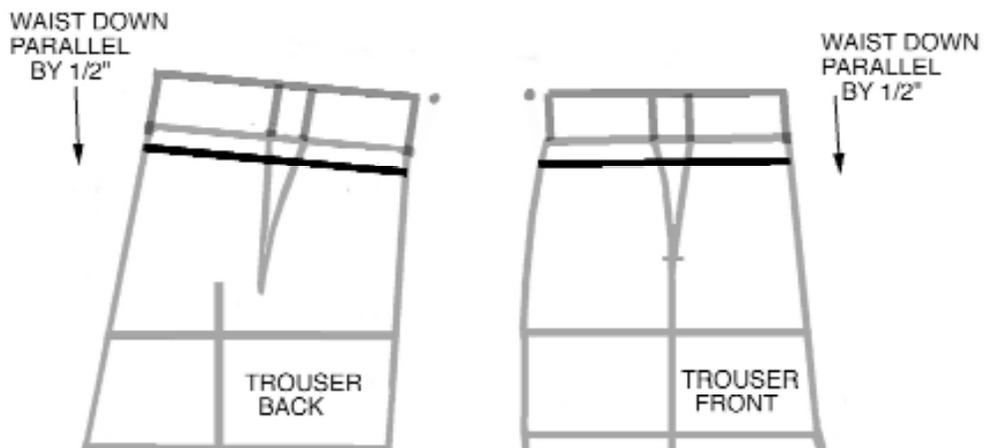
Now, extend the dart depths up perpendicular to the waist—these lines are parallel.



Extend out at the side seams, both front and back by 1/4 inch (6mm). This builds in the flare from the waist to the rib cage. (Even if you don't indent at the waist, do this—it will create the optical illusion that you do.)

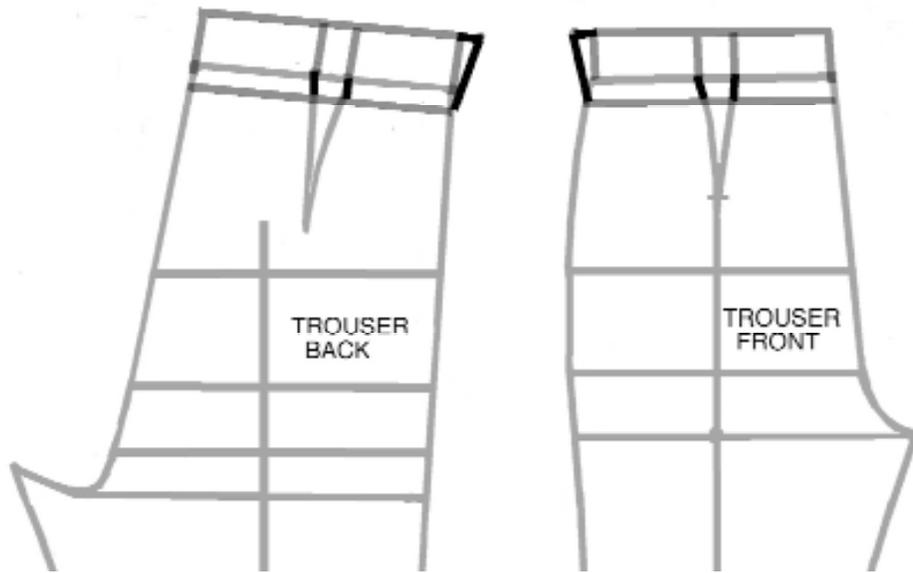


Draft a line parallel to the old waistline, 1/2 inch (12mm) below that line.

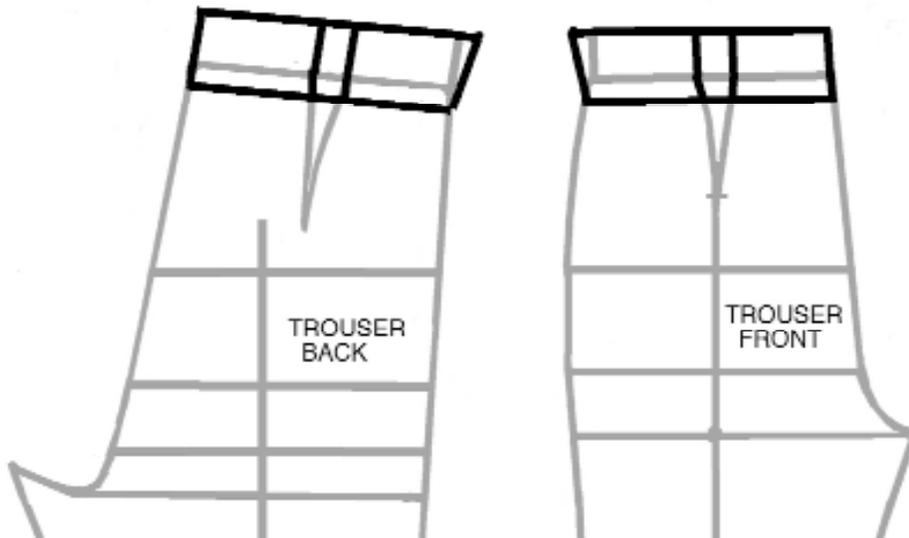


The reasoning behind this line: Remember in the pattern work for the foundation draft, when we lowered the waist from the actual waistline, to counteract for gravity? This functions in the same way. Since the garment doesn't cover the bust, we don't have to lower the waist so much.

Now, connect the dots by re-drafting the side seams, down to the new lines.

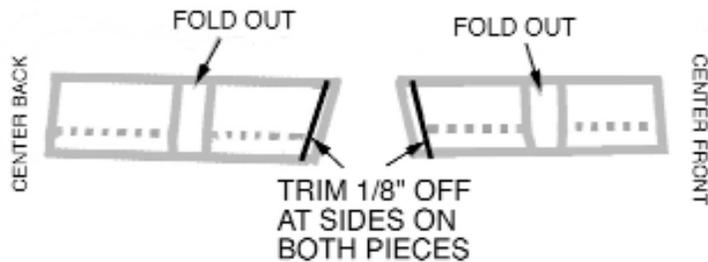


The black lines denote the lines you will trace out onto fresh paper to get your front and back facings.



These are the facing pieces you've traced out. Fold out the darts on both pieces, and tape them closed.

Trim off 1/8 inch (3mm) from the side seams, to compensate for the turn-of-cloth.



These are your finished waist facing pieces.

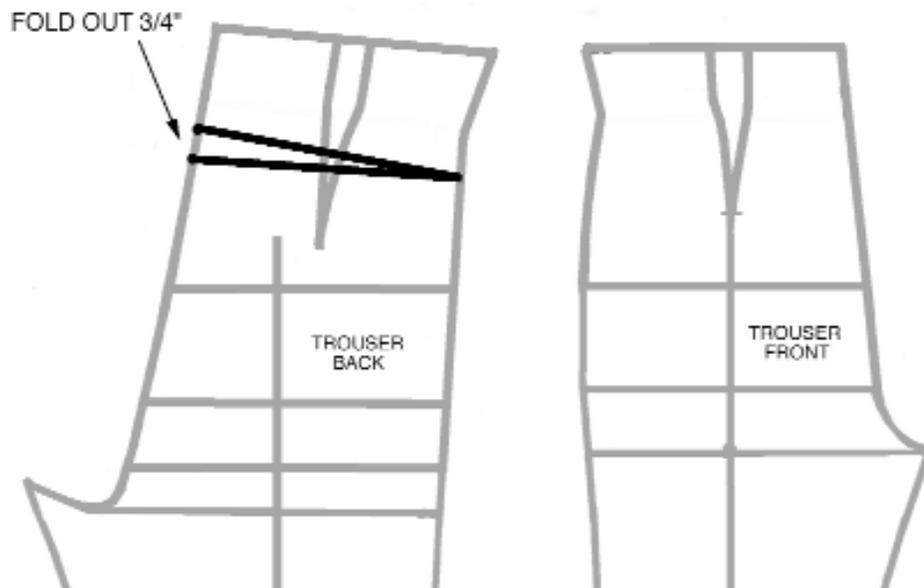


Note: I make arrowheads on the new waist seam, where the darts were folded out. This tells me which way is up—very important when constructing these garments!

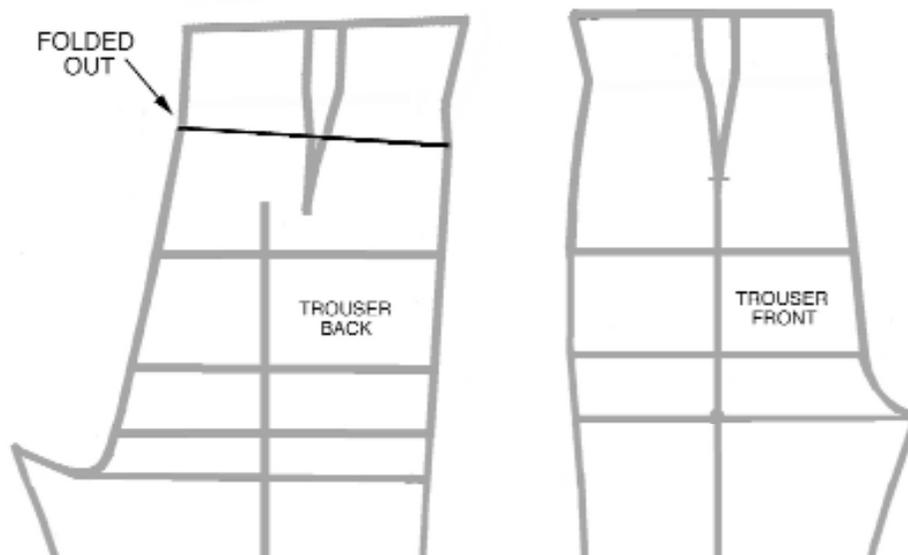
Also mark center front and center back, so you know exactly what you're looking at. Otherwise it's easy to get these pieces confused—they look like rectangles otherwise.

Now, back to the body pieces: The front is finished and ready for cutting.

The back needs one modification—right below the actual waistline, you will need to fold out $\frac{3}{4}$ inch (18mm) in a wedge across to the side seam. This is because the garment goes into the curve at the small of the back, and then comes back out. If you didn't make this fold in the pattern, you would get a horizontal ripple right there, which you would have to alter by taking the facing off and pulling the center back up.



This is what the finished pattern will look like.



CONSTRUCTION:

Constructing the high faced waistband has some similarity to the net bustier, in that the garment hangs from the topline, the facing/net bustier performing dual duty. The facing, as does the net bustier, supports the garment, and finishes the topline of the garment.

This is a photo of the inside of the above high waisted skirt.



The skirt itself, as well as the lining, hangs from the waist seam that joins to the facing. This makes finishing much easier.

You will construct the skirt, install the invisible zipper, install the lining, and baste the top seam of the lining to the skirt itself. It is now ready for the facing. You will also see the skirt hanger tapes attached to the facing. This is a nice thing to do, and makes hanging the skirt much easier.



The hanger tapes are attached halfway down the facing, so they won't accidentally appear over the topline during wearing.

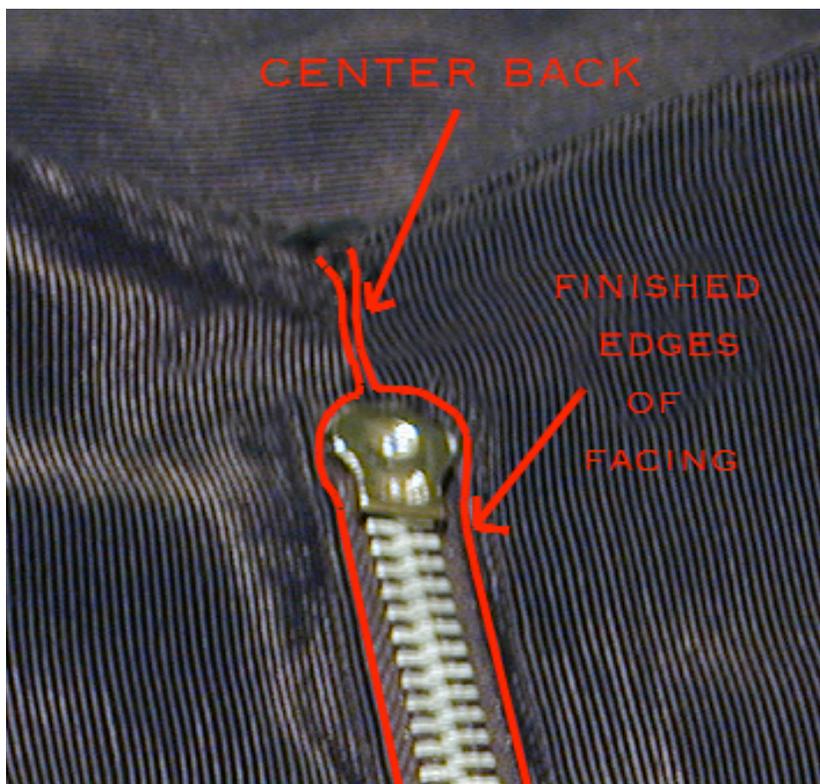


Cut the facing from the fashion fabric, and also from the twill you would use for your foundation layer. Cut the twill with the lengthwise grain parallel to the waist, same as for the foundation layer. The white line in this photo is the lengthwise grain of the twill used for the facing.

In the photo, you can also see bones stitched into the facing piece. They are placed at the center front, behind the waist darts (front and back), and at the side seams.

After you cut the facings out of the fashion fabric and the twill, you will do what is called “facing the facing”.

This is done by placing the twill and fashion fabrics right sides together, and stitching the lower edge, and up to the center backs. The detail photo shows in red where the finished edges of the facing will be at the center back. Notice that they make room for the zipper?

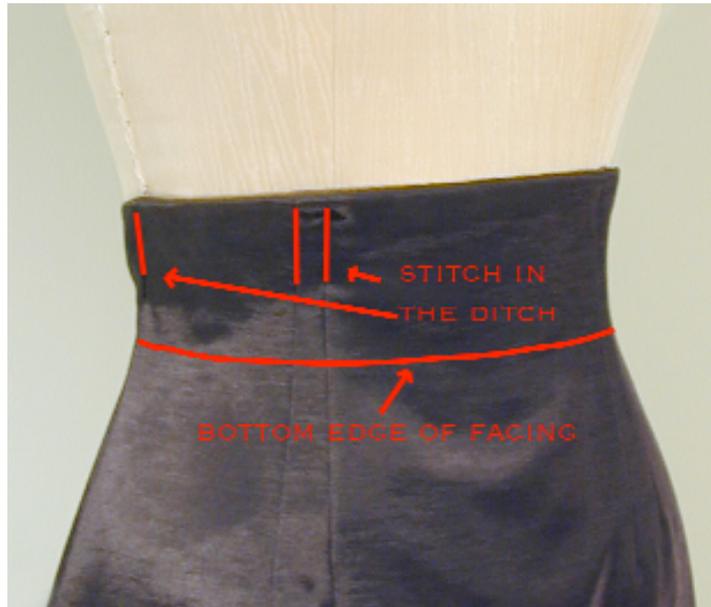


After stitching, grade your seams and clip your curves, and turn the facings right-side-out. The lower edge of the facing is now completely finished. The upper seam allowances will sew to the skirt, and be finished that way.

After you “face the facing”, you can install the bones by stitching them through all layers.

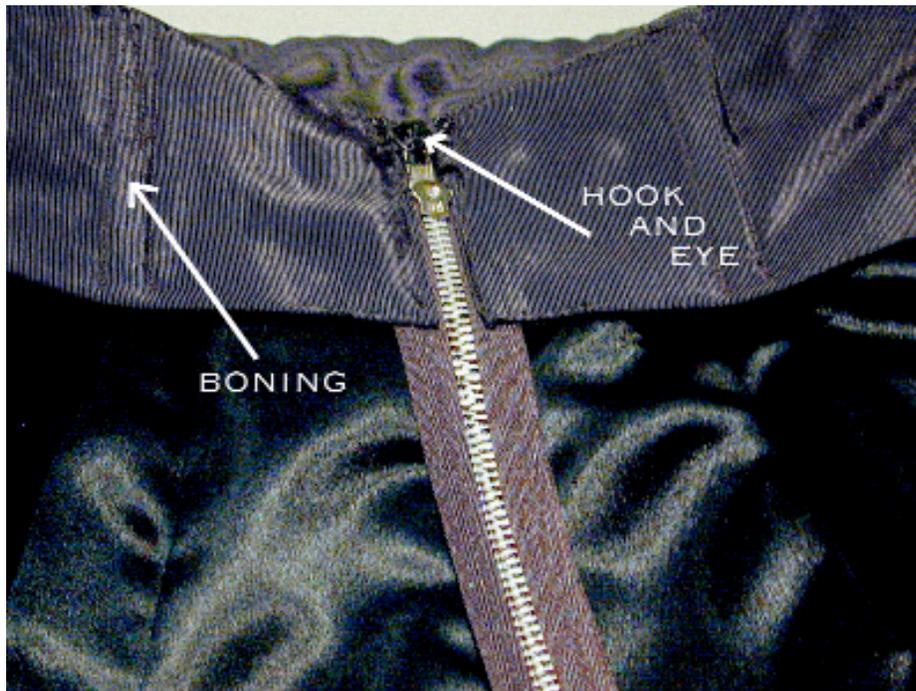
Sew the facing to the topline of the skirt, as you would a standard facing. Trim your seams; press the seam allowances towards the facing, and edge stitch them down to the facing. Turn the facing to the inside of the garment and press by steaming in position, over a pressing ham.

Once the facings are pressed in place, you will secure them by stitching in the ditch. Stitch in the ditch in the darts (front and back), and the side seams.



Start the stitching about 1/2 inch (1.2-1.5cm) from the topline, and stitch for 3/4"-1 inch (18.8-2.4cm). This allows the garment to hang free of the bottom edge of the facing.

Don't stitch all the way down to the bottom edge of the facing—if you do, the garment will pull and buckle at the edge of the facing



As you can see, there are two zippers here—a sturdy metal zipper to close the facing (and take the strain), and an invisible zipper to close the garment. The metal zipper is as long as the garment zipper, and hangs loose inside the garment. The additional length of the zipper makes it so you can pull it up over the hips. You can also use a separating zipper, but for this purpose, it's a little too short to zip easily. Having the longer zipper here gives you a running start.

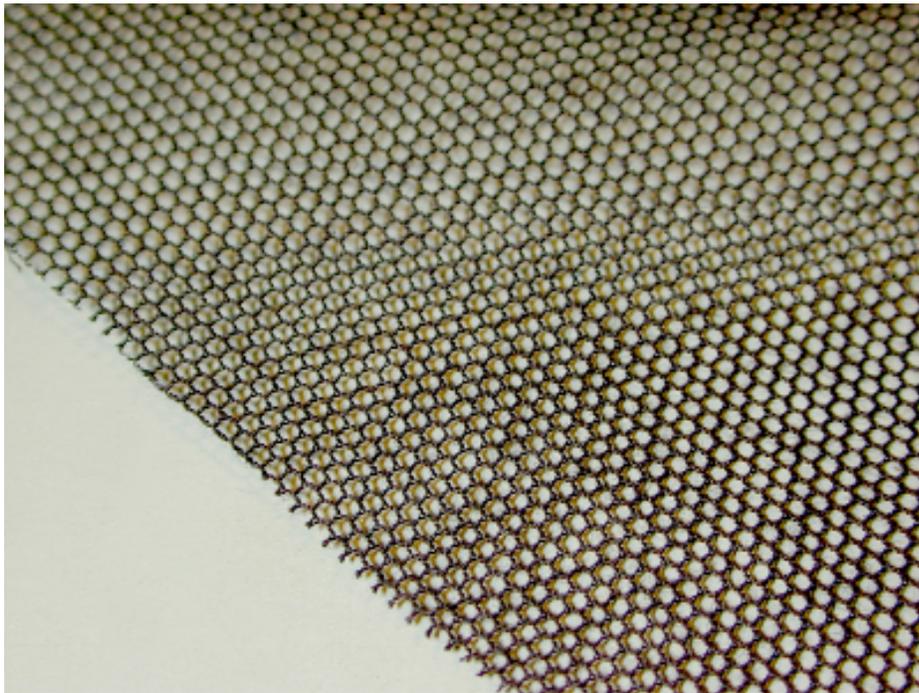
At the top of the metal zipper is a sturdy hook and eye. I like to hook this closed, and then close the metal zipper. After you fasten these, center the garment on yourself, then close the invisible zipper.



NET FOUNDATION BUSTIER:

There are times, when you want to make a strapless dress that is semi-fitted, or full and flowing. In this case you are not able to use the above type of bustier construction. This is where the net bustier is called for.

I did some reading about ballet costuming, and this is based on what I learned. It will look really familiar now, after reading the section on the high faced waist. In the trade, this type of construction is called a “**corselet**”.

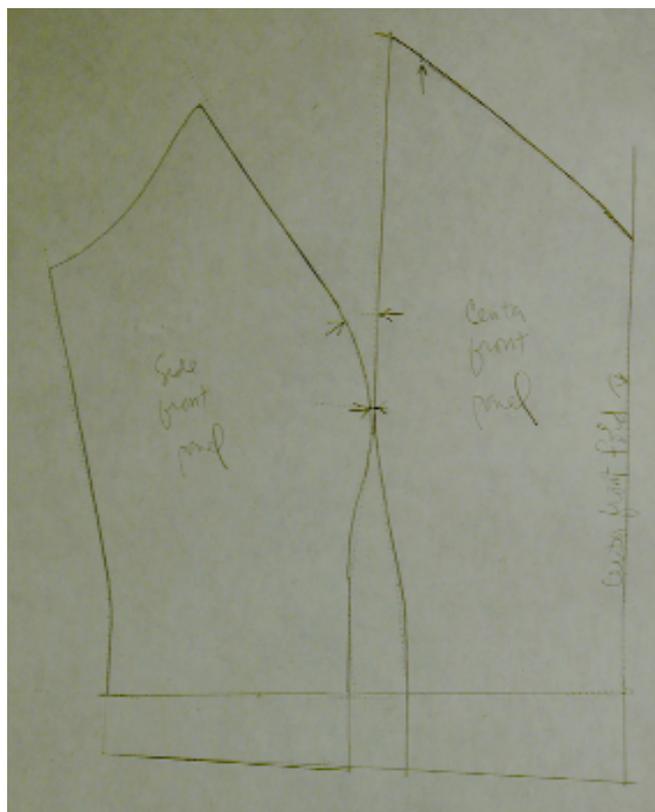
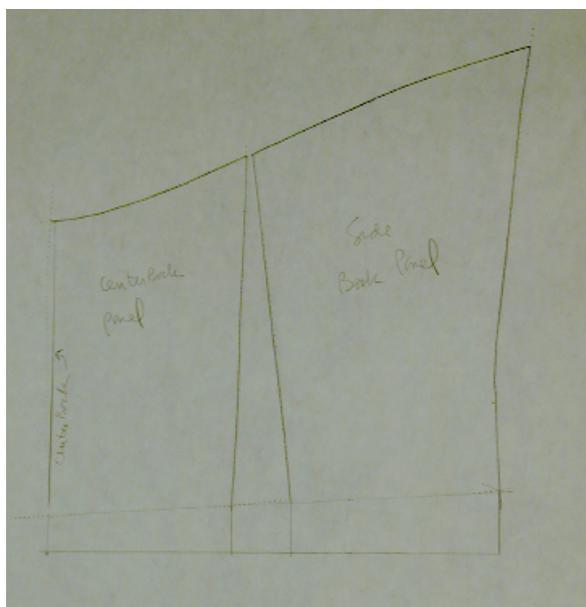


To start, we will discuss the “net” in the net bustier. It is the cotton tulle (or bobbinet) that I referred to in the materials section. Cotton tulle has a definite lengthwise grain and crosswise grain. The lengthwise grain has the least amount of stretch, just as in woven fabric.

(A side comment: nylon tulle, or nets of other artificial fibers, may look like cotton tulle, but they have way more spring and stretch. You may want to use them but know that taking the stretch out of them is a real challenge.)

In the example presented below, I have photographed a dress for a customer, from the beginning to the finished piece. I had already made her a dress from this pattern, but with straps, so I know it fits already. We started with the moulage, and I developed the pattern from there.

These are photos of the net foundation pattern pieces, ready for cutting.



Once you have the pattern pieces, it is time to prepare the tulle. Cut two layers for each garment section, larger than you need. The grainlines on these pieces are perpendicular to each other.

After cutting all of the pieces of tulle, you will iron and stretch each layer of the tulle on the lengthwise grain, to get any residual stretch out. Once done, lay them back together.

Quilt the two layers together. In ballet costuming this is done by sewing grids of straight lines, but I drop the feed dogs and do free-motion sewing. It does the same thing, and when finished looks more decorative, like lingerie.

The light blue stitching in the photo is for demonstration only. I'll use black in the garment.



Once you stitch the pieces, you will stretch and press again, to remove any stretch you may have added in the stitching.

This is a photo of the stitching in black, which I used for this piece.



Now that you have all your tulle prepared, you are ready to lay out the pattern, mark, and cut.



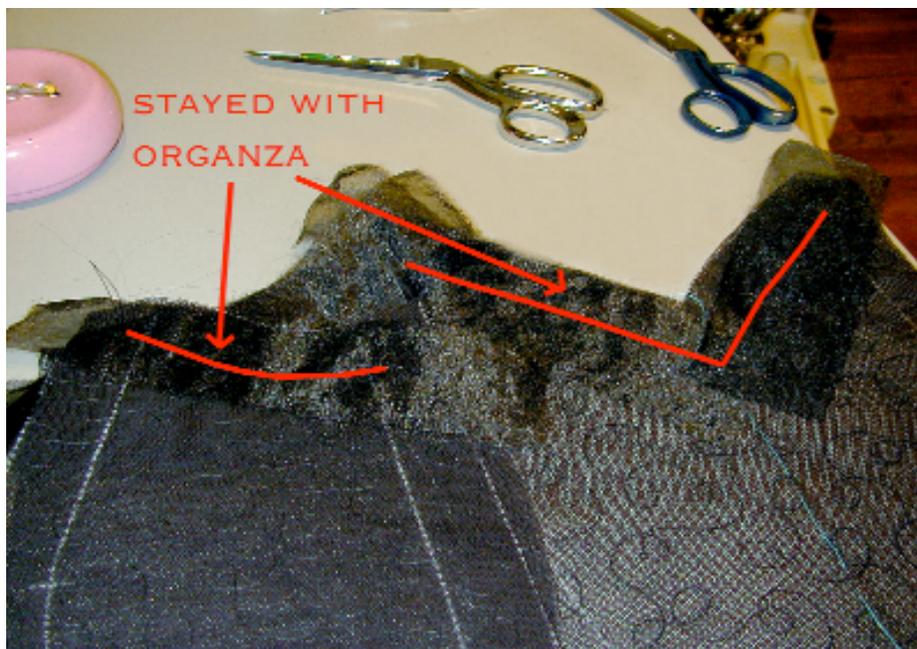
I was trained to mark a seam line and cutting line, using a dual tracing wheel and tracing carbon.

Make a wide seam allowance (at least 1 1/8 inch, or 2.6cm). Give at least 1 1/2 inch (3.6cm) for the opening for the zipper.

These wide seam allowances will function as casings for bones, as well as finishing for the edge of the zipper later.



After you've cut this out, you will want to ease and stay the front topline seams with organza torn on the lengthwise grain.



Also, stay the back topline seams with the organza as well.



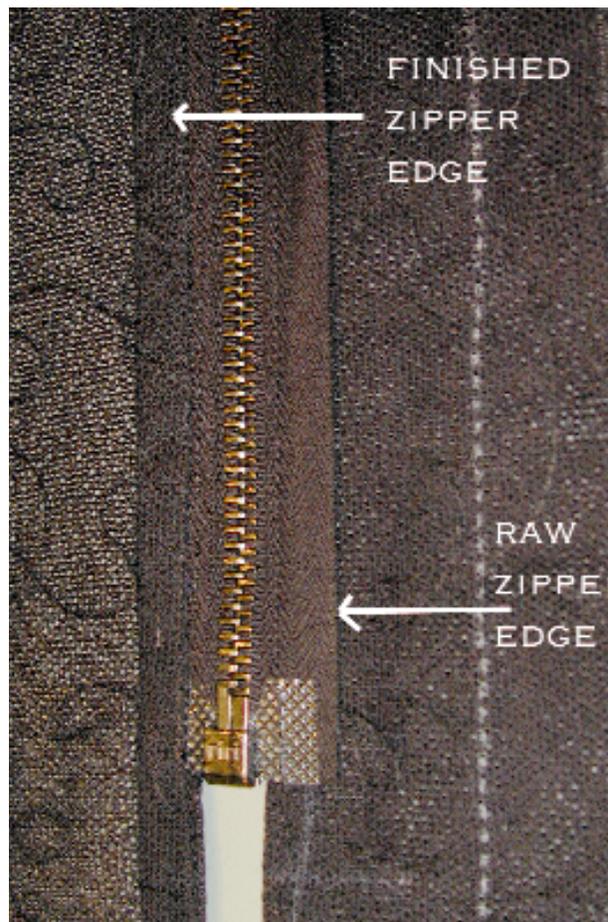
Now you want to install the zipper. Here we're using a metal, separating zipper. When choosing the zipper, make sure it is one of those that has the locking slide mechanism. This will ensure that it won't slide down while wearing.

Get a zipper longer than you need it, and then cut it down after you install it. Fold and press the seam allowance back, and edge stitch it to the zipper tape.

When installing the zipper, you will want to make sure the center of the zipper is also the center line of the garment. So, when you fold and press back the seam allowance, you will want to make sure you've accommodated for this.



After the zipper is installed, you can use the wide seam allowance to finish the edge of the zipper tape.



Detail of finishing the edge of the zipper tape with the seam allowance.

From here, you will now machine baste the sections together for the fitting. The beauty of sewing on the tulle is that you don't have to clip curves on the seam allowances to fit a princess line together—it stretches and makes the curve.



After the sections are basted together, cut rigilene boning to the required lengths of the seams. Machine baste these bones to the seam allowances.



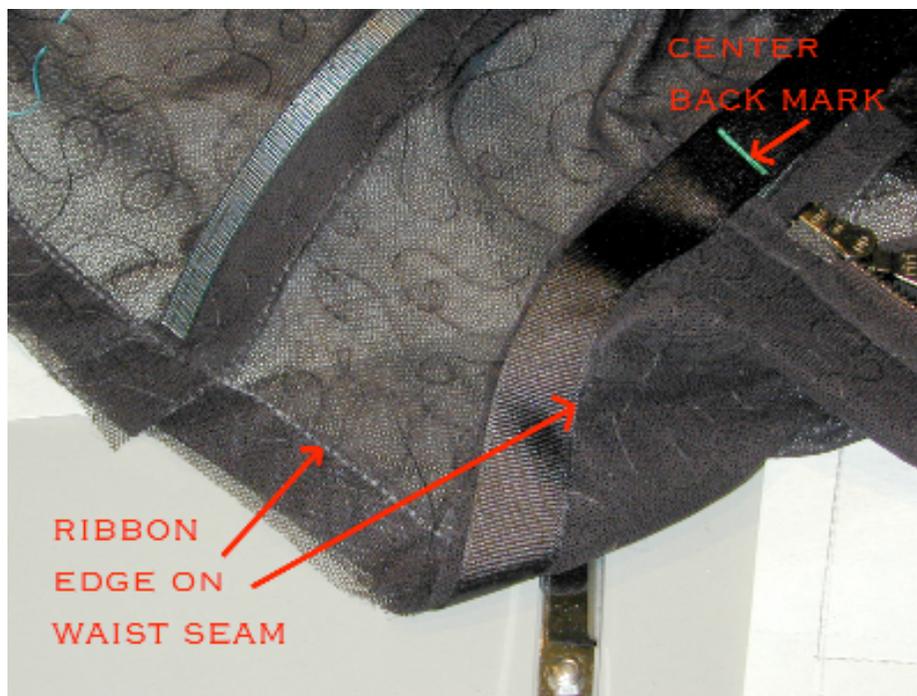
Now you will machine baste the waist ribbon to the bottom edge of the foundation. To get the length of the ribbon, measure the total length of the waistline on the pattern. Subtract 3/4 inch (1.8cm). This is the length of the stay ribbon, where the center backs will match.



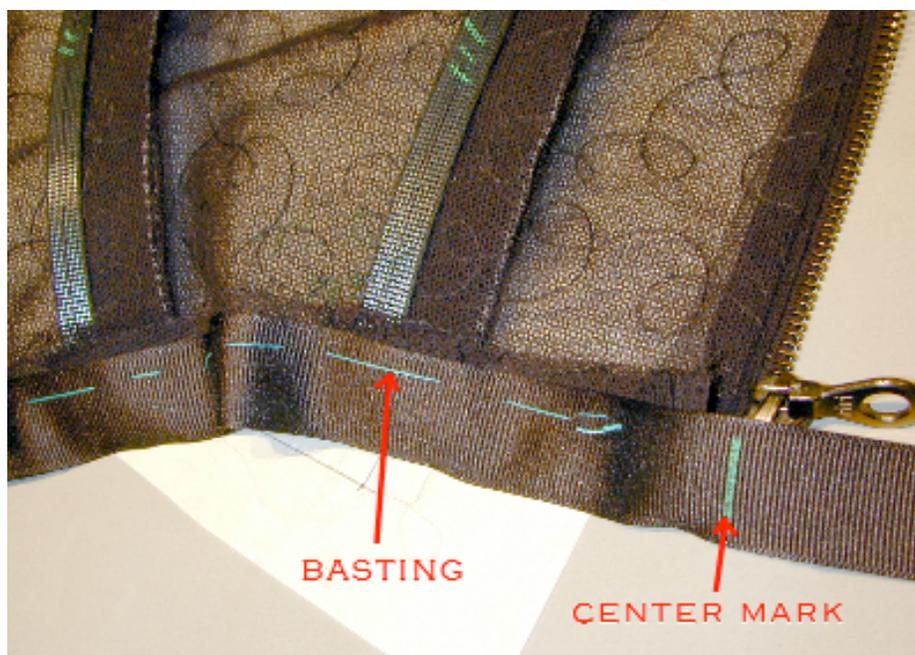
On the ribbon, make the first mark about 4 inches (8cm) from the end of the ribbon. Measure along the ribbon, the length of the stay ribbon, and mark. Cut off the ribbon another 4 inches (8cm) from the second mark.

Now, fold this ribbon in half, matching the marks, to get a center front.

Pin this stay ribbon to the bottom edge of the foundation, distributing the excess net along the ribbon. Make sure the edge of the ribbon is on the waist seam line. (see photo.) Machine baste in place.



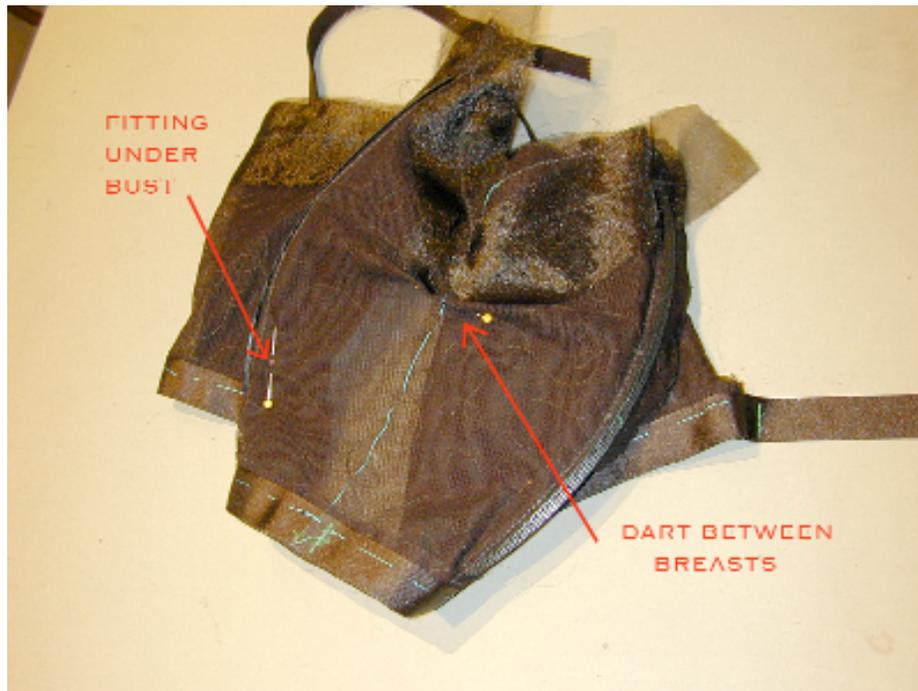
Turn the stay ribbon up, and thread baste in position for the fitting.



THE TRY-ON:

At this point, you are ready to try this on the customer. You are looking for proper fit, bust containment (does the bust stay put or does it shift down?) and a good snug but not tight fit on the topline.

(My customer preferred not to be photographed in this stage of undress. Sorry.)



My fitting adjustments were to better shape the bust. There was some removed below the bust to make the foundation fit more snugly against the rib cage. Then I took a horizontal dart out between the bust points. I find that this gives the bust better definition—two individual breasts instead of one continuous “bumper” across the front.



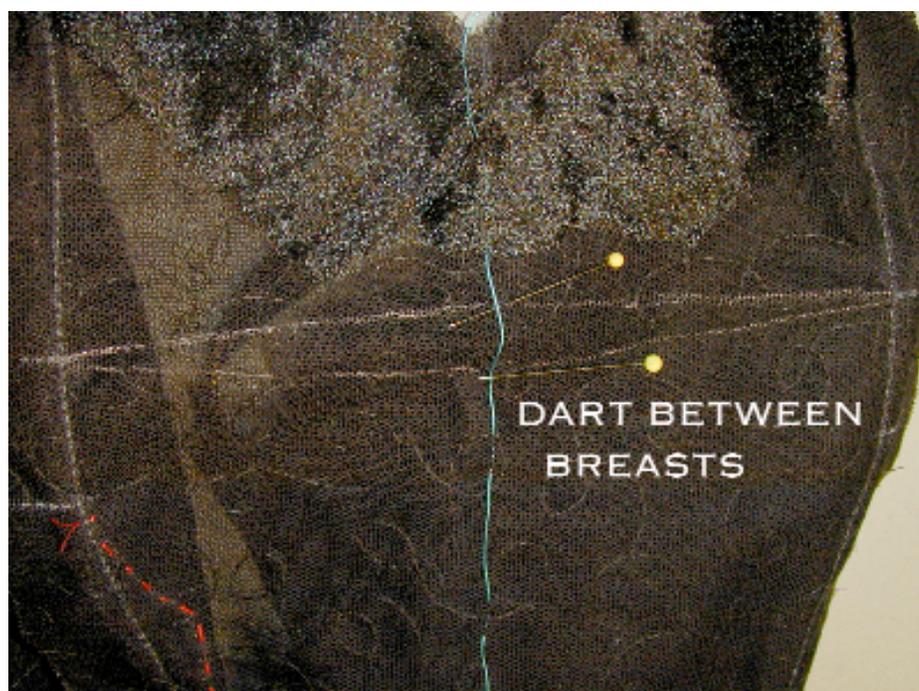
Now, to remove the bones, and waistband, stitch the seams with a shorter stitch, and make the fitting adjustments

I am marking the adjustment under the bust in basting.



Now, for symmetry, I'm transferring it to the other half, with tracing wheel and carbon paper.

(Yes, that's a sterling-silver-handled tracing wheel. The seam ripper also has a sterling silver handle.)

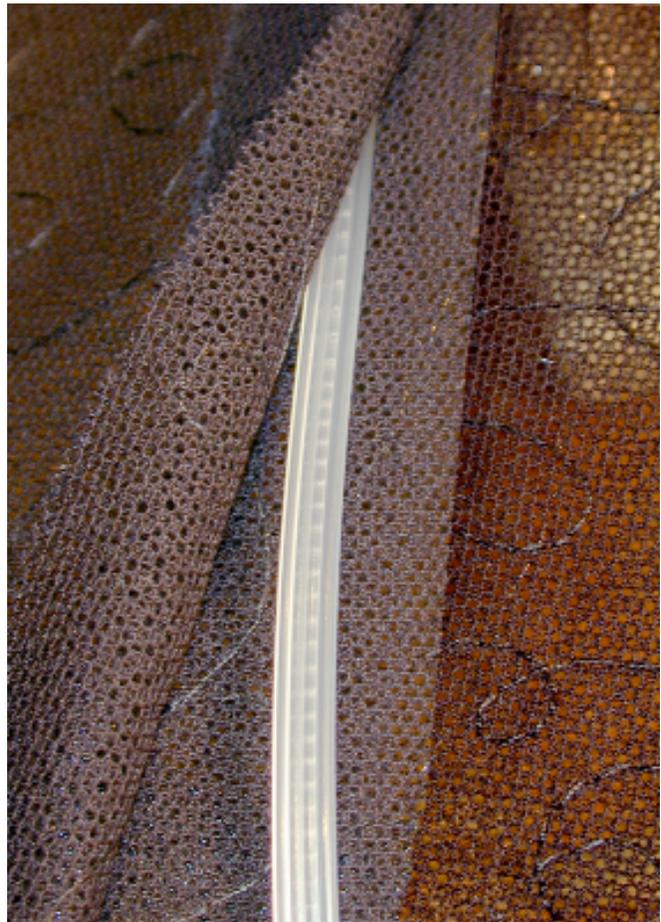


This shows the dart between the breasts, marked for stitching. At this point, I will sew this dart, and the fitting changes. Press all seam allowances towards the center front.

Once all the fitting is done, you can install the bones. In this construction, I use the traditional bones in casings. These bones are narrower, and this construction looks better in transparent fabrics.

To begin, cut the bone the length of the seam. Remove it from the fabric casing it comes in.

Slip it between the two seam allowances.



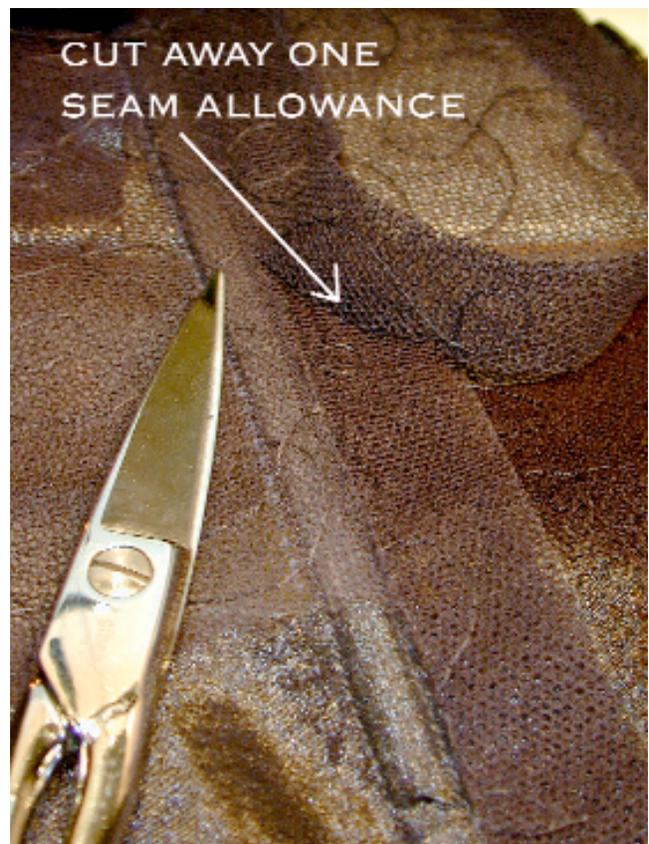
With your generic adjustable zipper foot, and both seam allowances pressed to the right, set the foot so the needle is almost outside the edge of the notch in the foot.



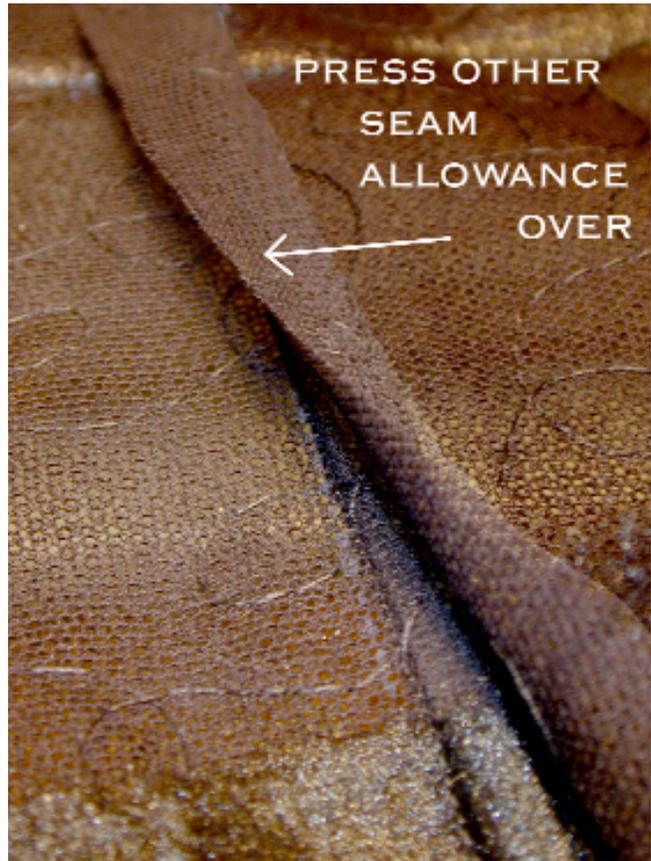
You will stitch the two layers of seam allowances down to the foundation. See the close-up.



Once you have stitched, you will trim away the UPPERMOST seam allowance ONLY. Trim it to 1/8 inch (3mm) from the seam line.



From here, you will press the remaining seam allowance back to the left, over the bone...



And stitch it down with the zipper foot also in "position #2".



You will now trim away the remainder of this seam allowance to 1/8 inch (3mm).



Use the zipper foot in "position #2" to sew across the ends of the bones, securing them into the casing.

You now have a casing!





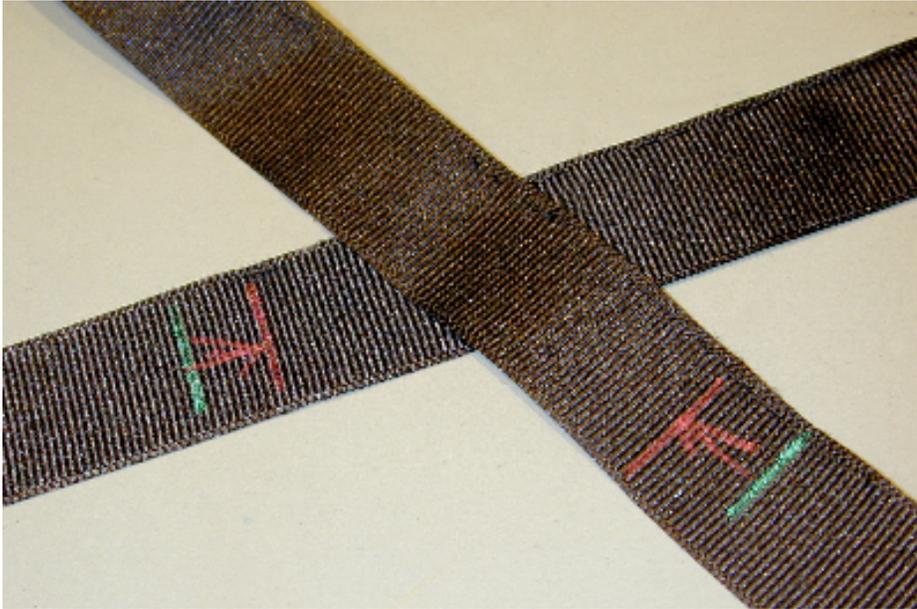
This photo shows all the bones in their casings.

Since this customer has a full bust, I wanted to add some reinforcement. I stitched a bone (this time using the fabric casing it comes with) diagonally from point S at the side seam, to the intersection of waist and princess line.

Then the second, shorter bone, is stitched on from about 3 inches (7.2cm) below the underarm point S, and angled to point to the bust point.

(These are highlighter in white.)





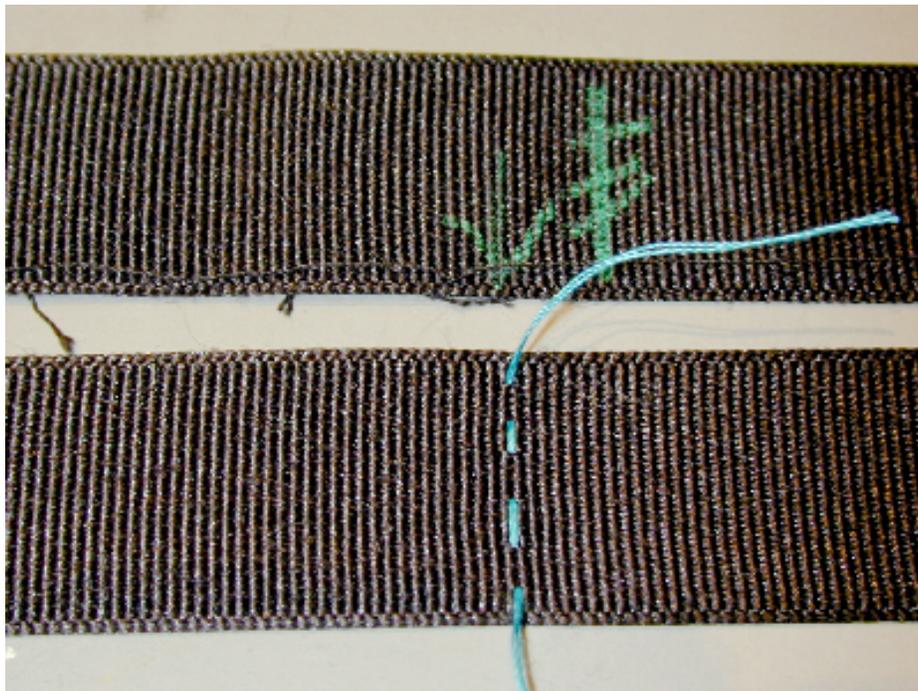
Now that all the bones are in, we can install the waist stay. Using the ribbon that we installed for this fitting, I determined that I needed to shorten it by a total of 1 inch (2.4cm). This is marked in red.



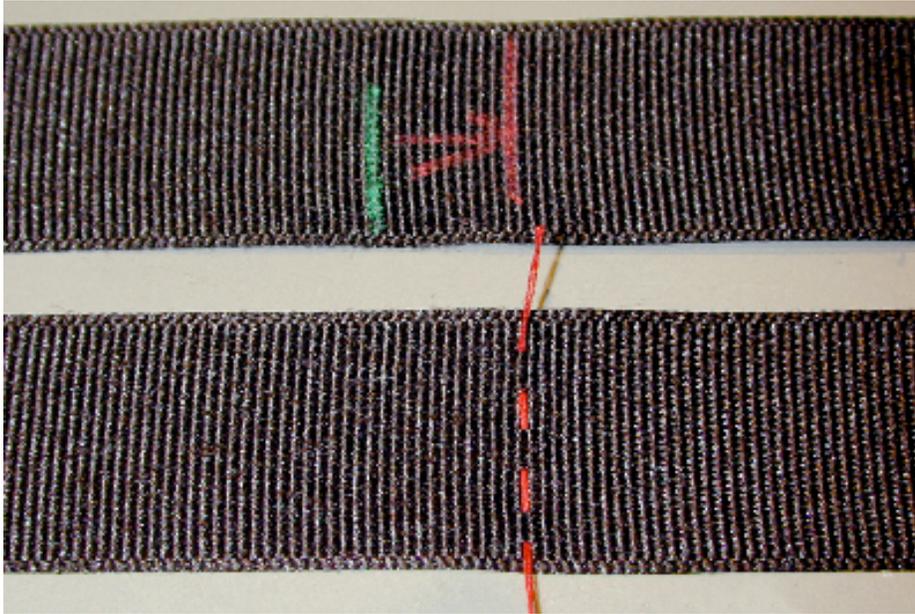
On a fresh piece of ribbon, hem the end by 1 inch (2.4cm) to accept the hook.



This folded edge will be the center back, and will correspond with the new corrected mark on the old ribbon.



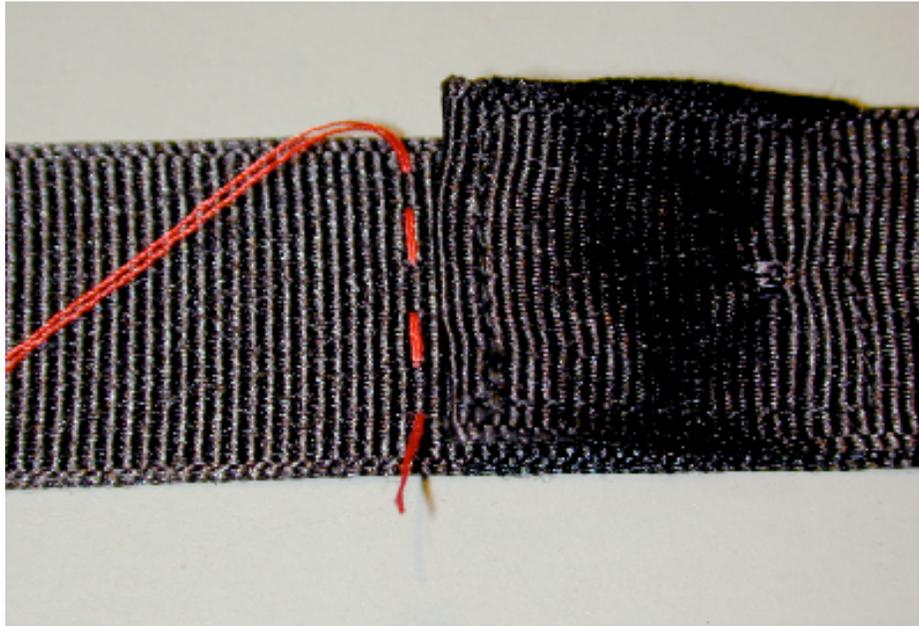
Mark a new center front with basting...



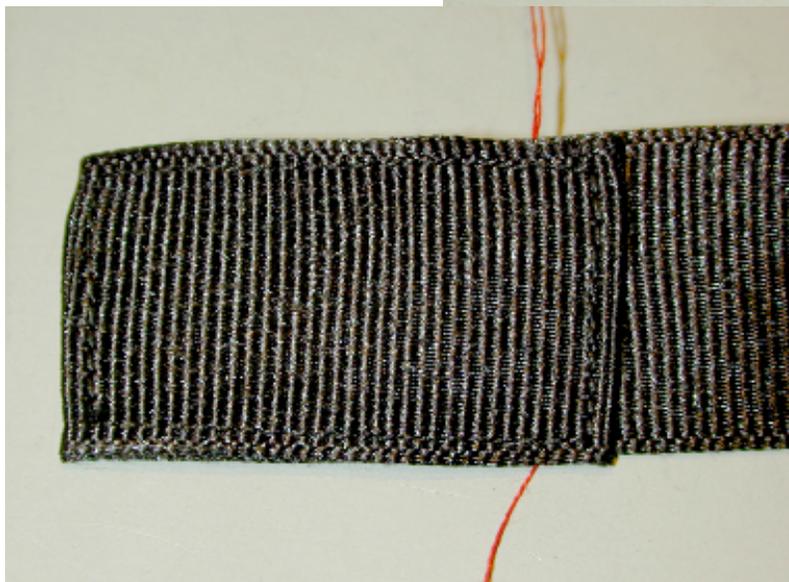
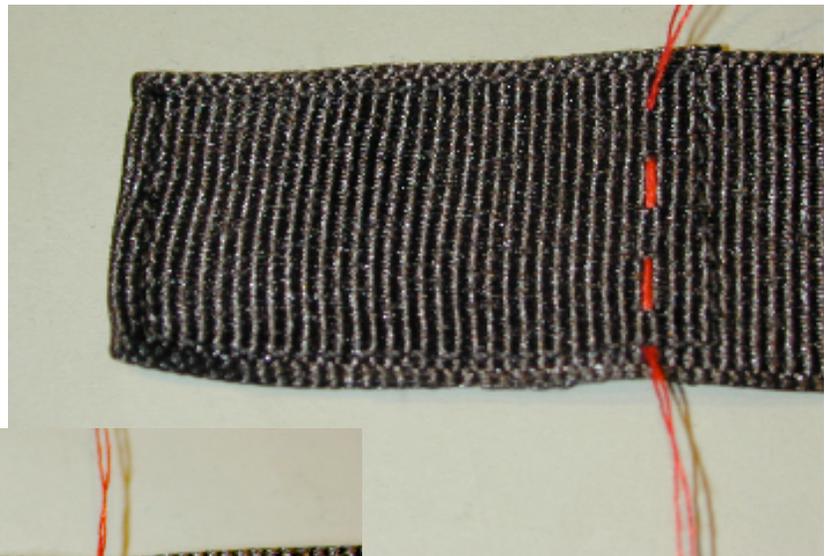
And mark the rest of the finished length in red basting at the other end. Leave a few inches, then cut the ribbon from the spool.



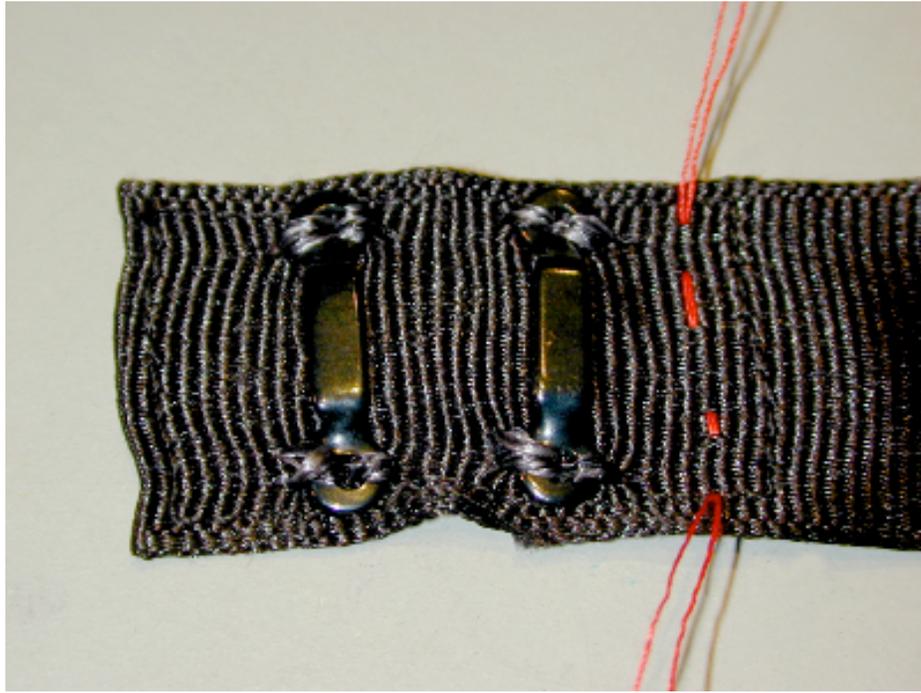
Install a heavy-duty hook on the first end.



Overlap the two ends, matching the center backs, to determine the hem allowance.



Hem the end that will receive the eyes, making the hem about 1 1/2 inch (3.6cm).

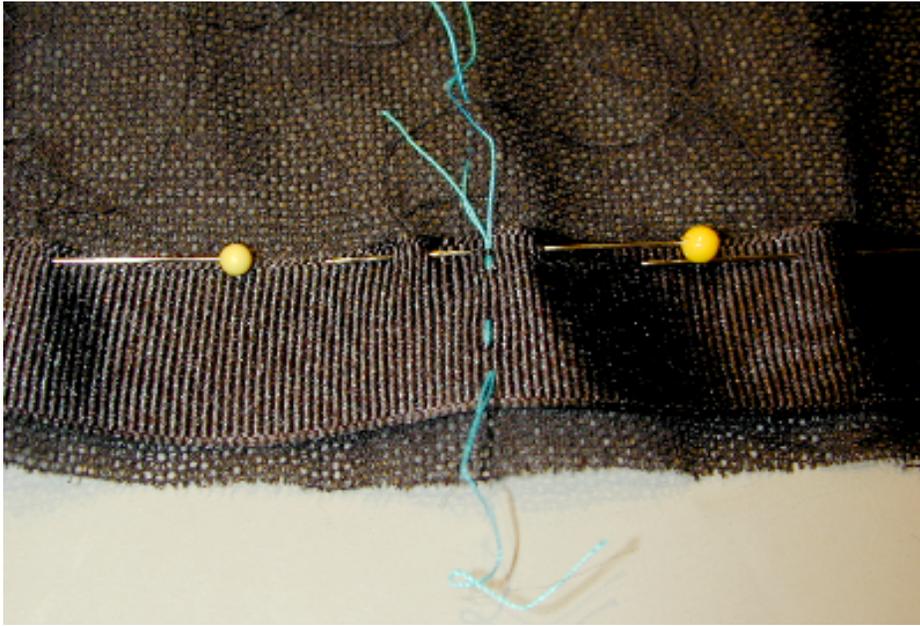


Overlap the two ends to determine eye placement.

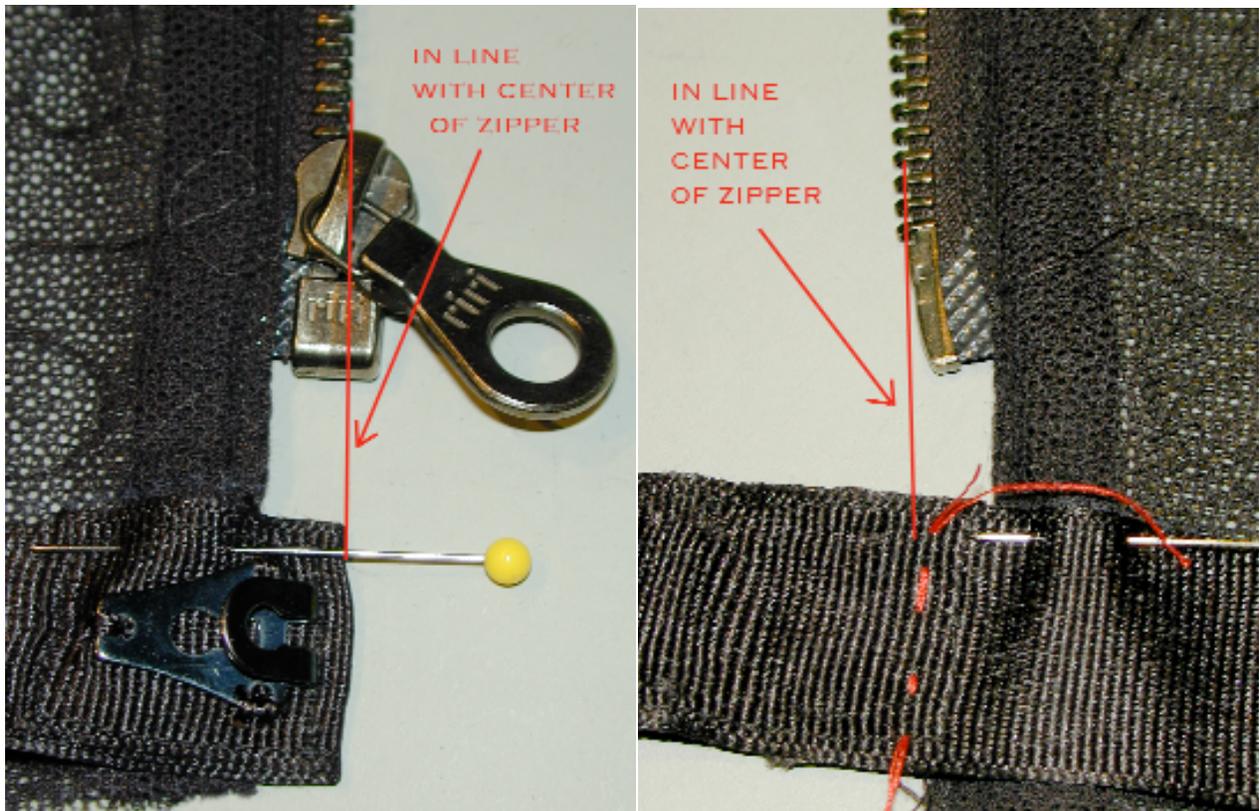
Install the eyes. The first one is the finished length, and the second one is about 1/2 inch (1.2cm) further out—this is so she can eat and adjust for a bit more comfort.



Once the waist stay is prepared, pin it onto the BACK side of the foundation, with the edge of the ribbon on the waist seam. Since it is shorter than the pattern measure, you will have to ease the foundation slightly to attach it to the ribbon.



Make sure center front matches.



Also make sure the center backs line up with the center of the zipper.



Edge stitch the ribbon to the foundation.

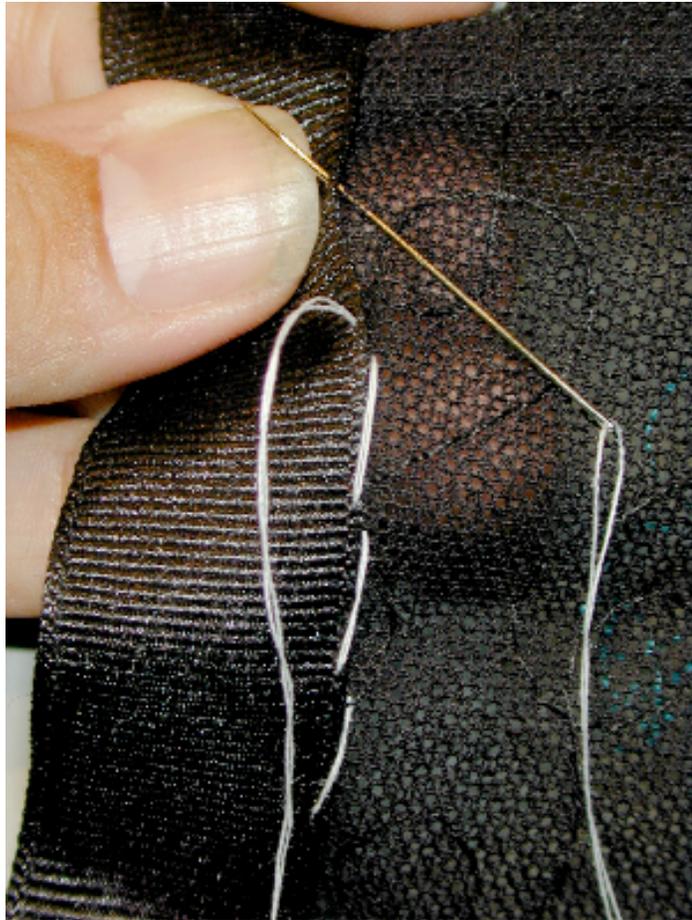
After stitching, trim away the seam allowances to 1/2 inch (1.2cm).





Press the waist stay up towards the inside of the foundation, and pin in place.

Whipstitch the other edge in place,



Make tacks at all the bones.



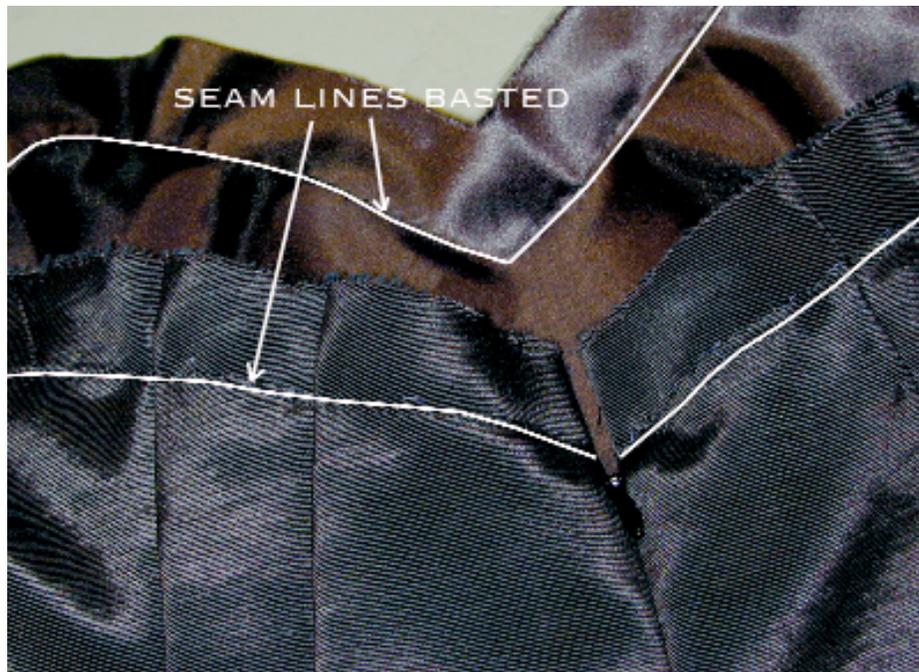
On the hook end of the ribbon, stop hand stitching about 2 inches (4.8cm) from the end. Sew a machine tack here, to secure. Stopping the stitching here will make it easier to fasten the waist stay.

Once the net bustier was finished, I cut out and constructed the dress. As I said earlier, I made a version of this dress for the customer with straps, so the fit issues of making the muslins and all that were taken care of earlier.

This photo shows the dress constructed, and ready for the fitting. The lining is hung from the topline, and the hem is left unfinished.



This is a close up of the topline, showing that the lining is basted to the dress on the seam line.



This photo shows that the zipper is finished at this stage.



THE NEXT FITTING:

At this point, I did the next fitting on the customer. She has proven to be very camera shy, but trust me to say the net bustier fit really well, and she felt secure in it.

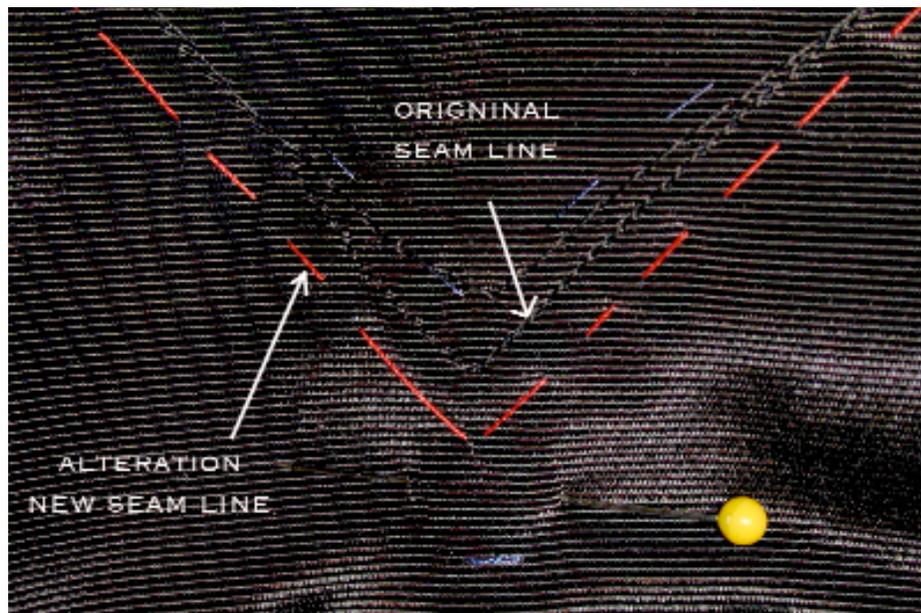
During the fitting, I first put the net bustier on her. Then, I pinned the dress to the net bustier at the topline seam.

Things to look for when fitting:

Are the side seams plumb with the floor, or do they swing forward or back? You can correct that during the fitting by adjusting the positioning of the dress on the net bustier.

Is there a "droop" between the breasts? In this case, because I made a horizontal dart between the breasts, there was a droop. Know to look for that, and raise the neckline of the dress at the center front to compensate for the horizontal dart.

This photo shows the alteration to remove the excess created by the horizontal dart. When you make that alteration, the front of the garment will hang smooth, and you will get to see the contours of individual breasts made possible by that horizontal dart.



At this point, you need to shorten the zipper. In the photo, I'm showing that you want the slide of the zipper to stop at least 1/2 inch (1.2cm) from the seam line.

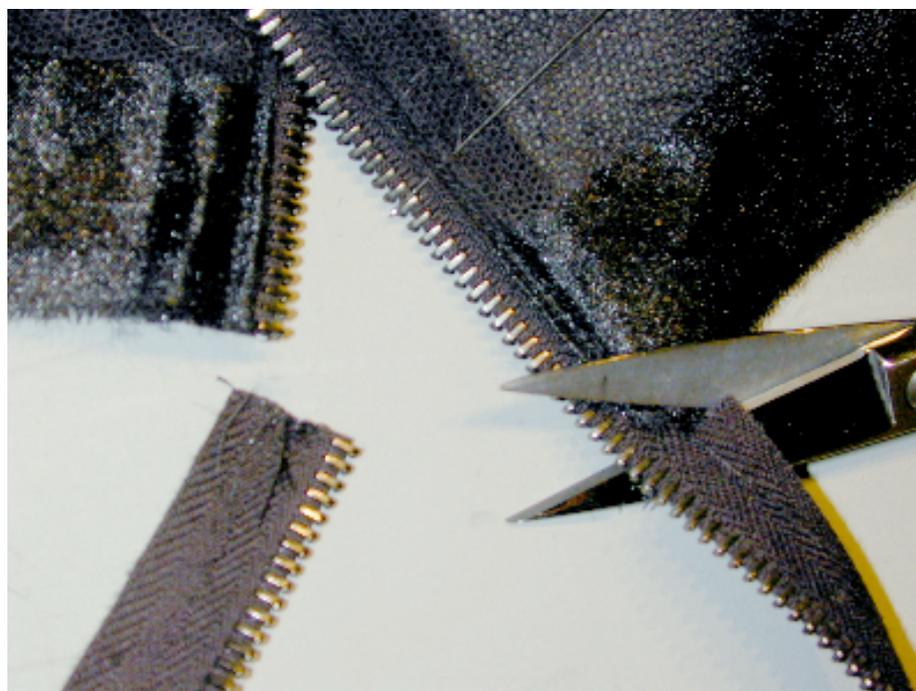


One of the beauties of metal zippers is that they can be shortened without it looking like an amateur job. All you need are wire cutters, and flat-jawed pliers.

In the photo, you see the wire cutters. You will use them to remove the “stops” on the end of the zipper. The stop is a U-shaped piece of metal, that you can pry open with the cutters.



Now, cut the extra length off the zipper.



Using the wire cutters, remove the teeth down to just below your pin. Do this to both sides of the zipper.



With the pliers, clamp the stop back onto the zipper tape. As before, do this to both sides of the zipper.



You now have a shorter zipper—one that looks like it was made specifically for this garment.



You're ready to put the net bustier onto the dress. Pin it in place, positioning the "inside" side of the bustier onto the fashion fabric. Pin in place. I also thread baste as well, using matching thread. It makes for easier sewing through the machine, because you don't have to worry about the pins. Also, you don't have to pickout basting later!



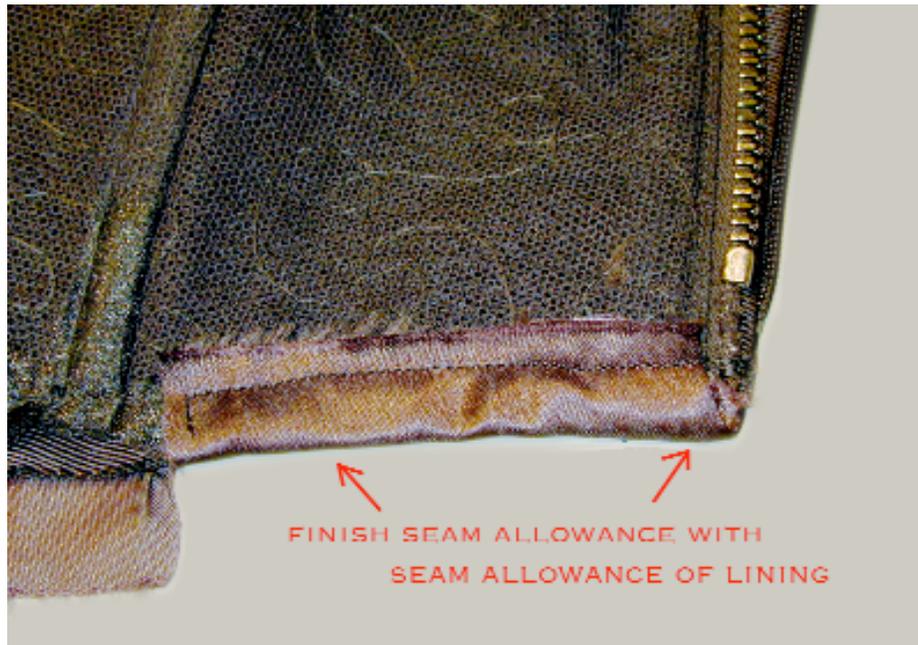
When sewing on the machine, it's helpful to use the zipper foot, putting the foot to the right of the seam line. This way, it is easier to sew close to the bones without hitting them.



This photo shows the pieces sewn together, ready for trimming. Grade your seams and clip your curves. Leave the seam allowance of the lining untrimmed.



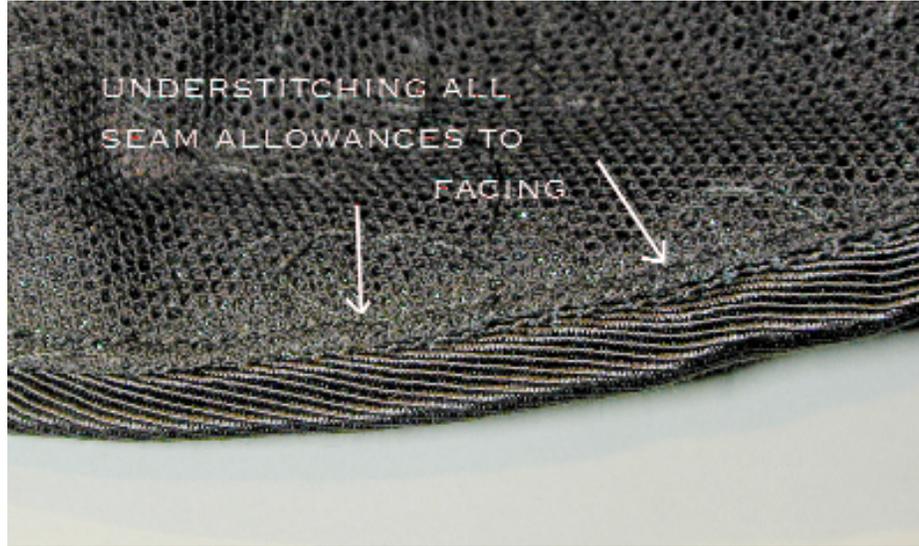
Use the untrimmed seam allowance of the lining, to finish about 3 inches (7.5cm) of the seam allowance at the center back. Since this will show when the zippers are open, it makes a tidy appearance to do this.



Turn everything right side out, and press. As before, press over a ham to get the proper shape.



After pressing, understitch the seam allowances to the net bustier side.

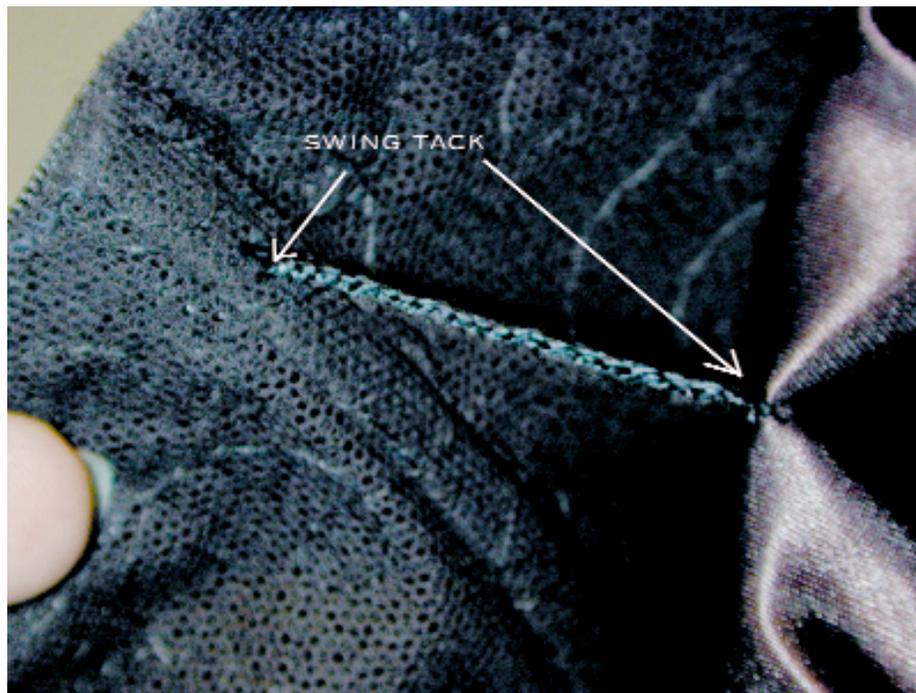


Once you've understitched the seam allowances in place, you will stitch in the ditch, through all layers. I did this about 1 inch (2.4cm) in the princess seams. You can do this wherever it will best "hide" in the design. This keeps the two layers in position, so the inside doesn't roll out over time.

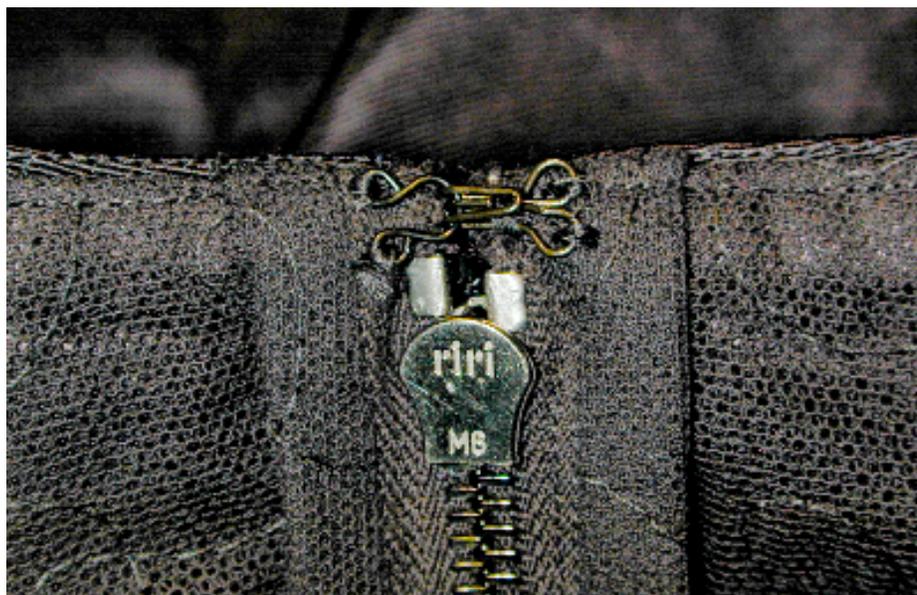


FINISHING:

Now you need to do the finishing. I like to make swing tacks at the side seams, to join the bottom of the net bustier with the lining. This is especially needed when hanging the garment on the hanger. If you don't do this, the garment will turn inside out and lose all hanger appeal. The swing tacks should be long, about 2 inches (4.8cm).



Sew a heavy-duty hook and eye at the top of the inside zipper. This takes the strain, so the zippers will stay up.



Attach the hanger tapes at the side seams. Position them well below the topline, and facing down. You don't want them creeping out over the topline while wearing.



Here we have a photo of what this dress looks like inside, looking at the center back. Finished, and functional, too!



This is a view of the dress looking at the center back zipper, from the outside.



Here is a view looking to the center front. Even without a body in it, this dress will stand up. That's what you want.



My finishing detail on this piece is a beaded edge. She will be wearing this with one of my beaded treader jackets over, so the beads tie the two pieces together by giving a subtle finish to the topline.



And this is a view of the dress on the hanger, looking to the center front. See how nicely this dress holds it's shape? It will do this on the body as well....



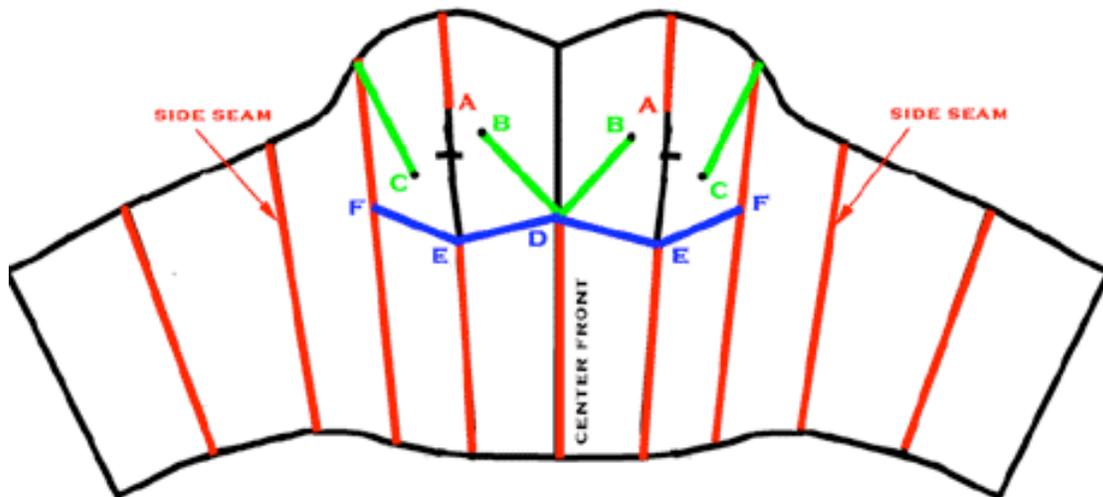
APPENDIX:

I always want to know more, and if someone wants to show me something new I'm there. So, my friend Lynda Maynard sent me an illustration of how she positions boning for strapless garments.

She explained to me that she doesn't like a bone running up the princess line—it's uncomfortable to her, and she feels it makes a harder line. So, as you can see in the illustration, she places her bones differently.

Her intent here was to create the look of a soft-cup bra, with an underwire, without using the underwire. Her customer felt really comfortable in this dress.

Here is the illustration of Lynda's boning configuration (Black lines are seams not boned. Colored lines represent bones.):



There are bones (red) running down along the princess line from the topline to 1 inch (2.4cm) from the bust point. The bones coming up along the princess lines from the waist end at the base of the breast (point E). The bone running up the center front from the waist ends 1/2-3/4 inch (1.2-1.8cm) above the level of points E.

There are also bones sewn midway between the princess seam and side seam (red).

The blue lines form an underwire of sorts. Points F are 1/2-3/4 inch above the level of point D.

The green lines give a more defined look to the bust, without making it pointy. The ends of these bones (points B and C) end 1 inch (2.3cm) away from the bust point.

AND THIS PHOTO IS JUST FOR
LAUGHS....



Thanks for reading!

