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FASHION INSTITUTE OF TECHNOLOGY

RESEARCH REPORT

DEVELOPMENT OF PATTERNS AND CLOTHING PROTOTYPES FOR NAVY WOMEN'S DRESS UNIFORMS

Fashion Institute of Technology

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Multifaceted analyses of the dimensions, components, and manufacturing technologies were conducted on the five U.S. Navy women's dress uniform parts in order to create new patterns and garment prototypes using recently developed anthropometric data. Inherent in these efforts were the needs to improve the fit of these uniform components, modify the construction to permit easier and less costly alterations when necessary, and make the garments capable of being mass produced by advanced technology methods. All of these objectives were accomplished without changing the current design or appearance of the garments.

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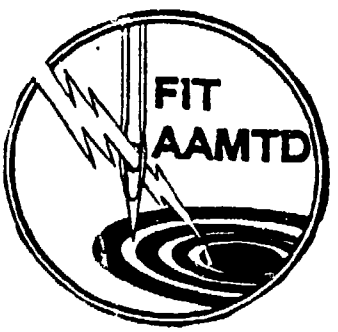

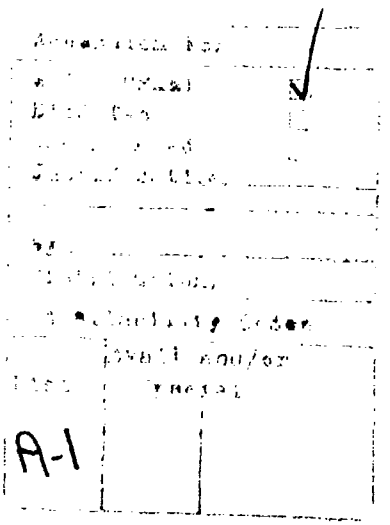

DEVELOPMENT OF PATTERNS AND CLOTHING PROTOTYPES

FOR

NAVY WOMEN'S DRESS UNIFORMS

FINAL TECHNICAL REPORT A008

Hilde Jaffe
Project Leader

MARCH 19, 1991

The project has been sponsored by the
Defense Logistics Agency
Cameron Station
Alexandria, VA 22304-6145

PREFACE

In 1988 and 1989 the U.S. Navy conducted an anthropometric study of its female personnel. The resulting data was analyzed and it showed that considerable changes had occurred in the body measurements of U.S. Navy women since the previous data collection. The patterns for the production of women's dress uniforms, however, were still based on the old anthropometric data, explaining why so many uniforms did not fit properly, and why, far too often, they required extensive alterations to fit the women to whom they were issued.

In order to reduce the number, extent, and cost of these alterations, it was decided that new patterns and samples of Navy women's dress uniforms should be constructed based on the new anthropometric data. These patterns and samples could then be used as the prototypes for future procurements in the open market.

At the same time, it was noted that in recent years changes had occurred in the U.S. apparel manufacturing industry which had a negative impact on production, cost, and availability of women's dress uniforms. The number of U.S. manufacturers willing and/or able to produce these garments in strict accordance with the applicable specifications had dwindled. At the same time, labor and overhead costs had escalated while the work force had steadily declined in numbers and skill levels. Manufacturers of items similar to women's dress uniforms but which are sold instead into the civilian market had successfully alleviated or circumvented some of the production problems. They had done this by making judicious changes in their components and manufacturing techniques that more readily interfaced with the use of semi- or fully-automatic production equipment. If a similar approach was taken to the problem that faced the U.S. Navy in the procurement of women's dress uniforms, especially if combined with state-of-the-art manufacturing guidelines for distribution to future manufacturers, it was thought that many of those problems could be eliminated.

With all of the foregoing in mind, the Advanced Apparel Manufacturing Department at the Fashion Institute of Technology (AAMTD/F.I.T.) proposed that new Navy women's dress uniform patterns and prototypes be developed that more adequately met the fit and production requirements of contemporary uniforms for the U.S. Navy. These new patterns and prototypes were to be based on the new U.S. Navy women's body measurements furnished by NCTRF (Navy Clothing and Textile Research Facility), and they were to be developed in accordance with improved manufacturing methods, incorporating the application of advanced manufacturing technology.

It was our expressed intention that the distinctive design features of the Navy women's dress uniforms would not be changed except for approved modification that might be required for improved fit and/or more easily accomplished alterations.

Late in August, 1989, we were awarded the contract to proceed with the project.

April 30, 1991

Hilde Jaffe
Project Leader

This research report is the result of work performed under sponsorship of the Fashion Institute of Technology and the United States Department of Defense, Defense Logistics Agency (Contract DLA900-87-D-0016).

It is hereby submitted to the DLA office (DPMSO), Cameron Station, Alexandria, VA 22304-6100 in accordance with the Contract Data Requirements List, sequence A008.

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Fashion Institute of Technology

Noah Brenner
Research Coordinator

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Lita Konde

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Mario Lupia

Ben Martin

Sirvart Mellian

Laura Nugent

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Rose Rosa

Rosario Sportswear, Inc.

Vincent Saladini

Wallace Sloves

Cassandra Williams

Harry Winer

Wolf Model Forms, Inc.

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1.0 INTRODUCTION.

1.1 THE PROJECT BACKGROUND.

1.1.1 Pattern Changes. Prompted by the persistent fitting problems of U.S. Navy uniforms for its female population, an anthropometric study was conducted by the Navy Clothing and Textile Research Facility (NCTRF) to determine new body measurement standards for apparel sizing. The new anthropometric data that was collected revealed that considerable changes had occurred in the body dimensions of its female personnel over the years since the last survey had been conducted.

As a result of the anthropometric study, a new sizing system has been developed by NCTRF. This new system takes into consideration the proportional differences of women, as well as the general gradations of measurements from small to large.

The need was thus established for the development of a group of better-fitting uniforms which must retain the basic style of the current garments, but provide better fit and need fewer and simpler, if any, alterations.

1.1.2 Manufacturing Changes. During the intervening years between the anthropometric studies, innovative moves toward advanced technology in manufacturing methods have been made by the civilian apparel industry. The manufacture of U.S. Navy women's dress uniforms according to current specifications, however, does not take advantage of these innovations that effectively reduce production time and skill requirements throughout the manufacturing cycle. As a result, procurement problems have developed as the number of apparel producers who are able and/or willing to produce the dress uniforms according to the strict and, in some cases, technologically outdated manufacturing specifications has decreased.

The Fashion Institute of Technology (F.I.T.) proposed that the new prototype garments that were to be developed should be modified to take advantage of modern manufacturing methods, and that improved production equipment and procedures, incorporating the application of advanced technology, should be recommended for use.

1.2 SCOPE.

The project required the development of new patterns and clothing prototypes based on the recently collected anthropometric data, the grading of initial prototypes into the com-

plete size ranges as proposed by NCTRF, and the delineation of advanced technology, as well as conventional production procedures, for the following five Navy women's dress uniforms, as identified by the appropriate Military Specifications.

- Coat, Woman's, Blue, Dress (MIL-C-29124)
- Skirt, Woman's, Blue, Dress (MIL-S-29122)
- Slacks, Woman's, Blue, Dress (MIL-S-41825)
- Skirt, Woman's, Belted (MIL-S-87053)
- Slacks, Woman's, Belted (MIL-S-87054)

1.3 OBJECTIVES.

Upon completion, the project was to result in:

- Better fitting garments;
- The need for fewer alterations;
- Lower alteration costs;
- Increased number of potential manufacturers; and,
- Lower production costs.

1.4 MATERIALS FURNISHED BY NAVY CLOTHING AND TEXTILE RESEARCH FACILITY (NCTRF).

NCTRF supplied the following materials to F.I.T.:

- Body Measurement Tables for Navy Women's Sizing Systems;
- One sample garment of each of the five Navy women's dress uniform items manufactured according to current Military Specifications;
- Blue Polyester/Wool Tropical fabric for fabricating the blue dress coats, skirts, and slacks;
- White Texturized Polyester fabric for fabricating the belted skirts; and,
- White Polyester/Cotton Twill fabric for fabricating the belted slacks.

2.0 PROJECT PERSONNEL.

The project team consisted of personnel from the Fashion Institute of Technology who acted as principal investigators and contributors, each in his or her area of expertise; consultants, currently active in the apparel industry who contributed unique professional inputs; and, F.I.T. students who worked as models and as assistants to the principal investigators.

2.1 PRINCIPAL INVESTIGATORS.

Hilde Jaffe, Professor, Fashion Design Department-Apparel Area. Ms. Jaffe acted as project leader and was the principal liaison between F.I.T./AAMTD and NCTRF. She supervised all aspects of the project and prepared the required reports. She also participated in the development of patterns, the inspection and measuring of prototypes, and was the F.I.T./ AAMTD representative at all fit tests.

Lita Konde, Associate Professor, Fashion Design Department-Apparel Area. Ms. Konde acted as the principal pattern designer on the project. She draped the initial patterns on dress forms and participated in all fit tests.

Josef Korngruen, Adjunct Assistant Professor, Apparel Production Management Department. Mr. Korngruen was the project's production engineer and supervised the manufacture of all the project-required garments after the initial prototypes were completed. He was responsible for the development of the production sequences with recommendations for equipment, incorporating both advanced technology and the more conventional manufacturing methods. He also worked with Prof. Jaffe in the inspection, measuring, and labeling of the prototype garments.

Cassandra Williams, Instructor, Patternmaking Technology Department. As the pattern grader assigned to the project, Ms. Williams developed the grade rules, graded the initial patterns, and developed markers for all prototypes on the Gerber Accu-Mark 300 System according to the new anthropometric data supplied by NCTRF. In the final phase of the project, Ms. Williams also supervised the conversion of all pattern data from the Gerber Accu-Mark 300 System magnetic tape to the Gerber AM-5 System magnetic tape.

Joseph Caffarelli, Adjunct Instructor, Fashion Design Department-Apparel Area. Mr. Caffarelli was responsible for the tailoring of the initial Navy Blue Dress Coat prototype. He also supervised the construction of the other initial prototypes that were developed.

2.2 FACULTY CONTRIBUTORS.

In October, 1989, with the project already under way for almost two months, and with less than ten months left to complete all the required activities, NCTRF requested that the activities be accelerated so as to complete them two months sooner. In an effort to accommodate this request it became necessary to

augment the research team with more people. The following members of the Fashion Institute of Technology faculty helped the principal investigators to maintain a constant flow of work throughout the early stages of the project.

Mario Lupia, Assistant Professor, Fashion Design Department-Apparel Area, participated in the conversion of the muslin toiles (models) into hard paper patterns for production of the initial prototypes.

Wallace Sloves, Associate Professor, Fashion Design Department-Apparel Area, assisted in the draping of the initial Navy Blue Dress Coat patterns.

Rose Rosa, Assistant Professor, Fashion Design Department-Apparel Area, assisted in the conversion of the muslin toiles into hard paper patterns.

Vincent Saladini, Adjunct Assistant Professor, Menswear Design and Marketing Department, worked with Mr. Korngruen in delineating the production sequences for the manufacture of the Navy Blue Dress Coat prototype.

Laura Nugent, Classroom Assistant, Apparel Production Management Department, completed the final checking of the magnetic pattern tapes when Ms. Williams became ill during the final phase of the project.

2.3 OTHER PARTICIPANTS.

The services of other participants, all successful professionals in the apparel industry, were also utilized to ensure conformance with prevailing industry practices.

Frank Orlando, Grading Systems Manager, Abe Schrader, Corp., worked closely with Cassandra Williams double-checking the grade rules throughout the grading process.

Bernard Holzman, Designer/owner, Harve Benard, Ltd., assisted the primary project team in the development of the second version of the Navy Blue Dress Coat.

Ben Martin, Tailor/patternmaker and partner, 5th Avenue Classics, consulted with the members of the project team in making pattern adjustments required for mass production.

2.4 STUDENTS.

Students enrolled in the Fashion Design, Patternmaking, and Marketing programs at F.I.T. assisted the project staff in

digitizing patterns into the computer and helped otherwise throughout the grading process. Several of them also served as models for the fit tests of the garments that were conducted at F.I.T.

3.0 F.I.T. EQUIPMENT SUPPORT.

The Fashion Institute of Technology provided laboratory space and equipment for the development of all of the garment patterns and prototypes. The F.I.T./AAMTD Center was utilized throughout all phases of the project, including:

- Patternmaking;
- Grading;
- Cutting;
- Sewing;
- Pressing; and,
- Inspection.

4.0 DESIGN MODIFICATIONS.

4.1 PROTOTYPE GARMENTS.

A total of 300 prototype garments were produced and sent to the U.S. Navy Training Center in Orlando, Florida for fit testing. The garments consisted of:

- 60 Women's Blue Dress Coats;
- 60 Women's Blue Dress Skirts;
- 60 Women's Blue Dress Slacks;
- 60 Women's White Belted Skirts; and,
- 60 Women's White Belted Slacks.

The following descriptions and sketches illustrate the design modifications incorporated in the prototypes developed by F.I.T./AAMTD.

4.1.1 Women's Blue Dress Coat (Figure I).

- The princess seam was moved approximately 3/8 inch toward the side seam.

- The dart at the side front was eliminated.

- A more shapely shoulder pad was used (**BRB Industries, #1016, plus 2**).

- Sleeve cap and armhole were reshaped.

- Side and shoulder seams were re-positioned.

- A one-inch seam allowance was provided on the side seam.

- All seams other than the side seam were provided with a 5/8 inch seam allowance.

- Woven fusible interfacing was used in all appropriate areas (**Crown Textile Company, #451/190B 66 Bleached**).

- The coat has an easier fit, and is not quite as close to the body as is the traditional one. This provides for the accommodation of more idiosyncracies of the human body and allows for more freedom of movement.

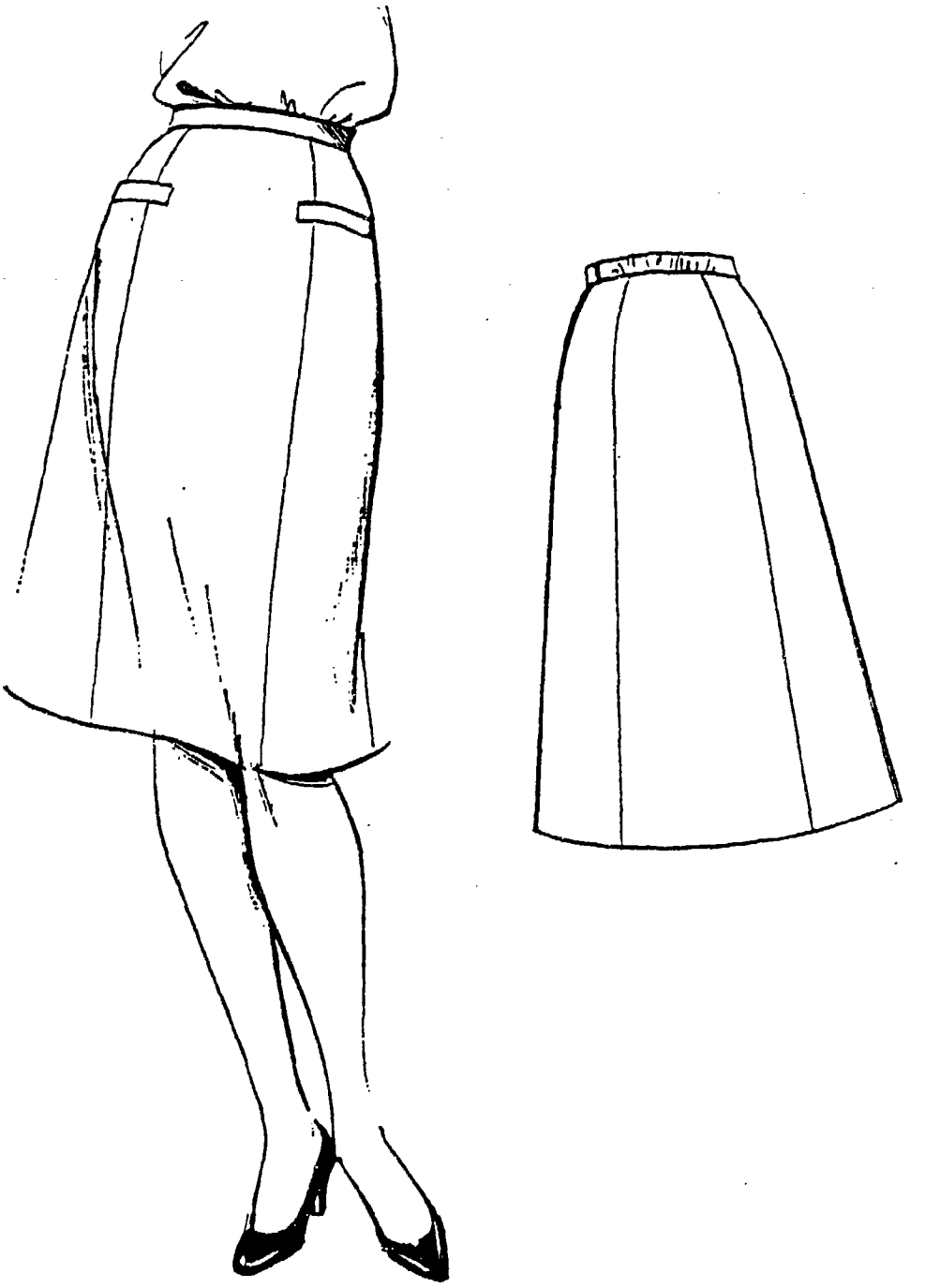
FIGURE I: WOMEN'S BLUE DRESS COAT

4.1.2 Women's Blue Dress Skirt (Figure II).

- An elastic section (**Paramount Trimming, #1036**) was inserted in the back of the waistband in order to make the waistband more comfortable and to accommodate differences in waistline circumferences of at least +/- 3/4 inch.

- The skirt silhouette was kept slim, with only slight flare provided for walking ease. This provides harmony with the easier fit of the dress coat.

FIGURE II: WOMEN'S BLUE DRESS SKIRT



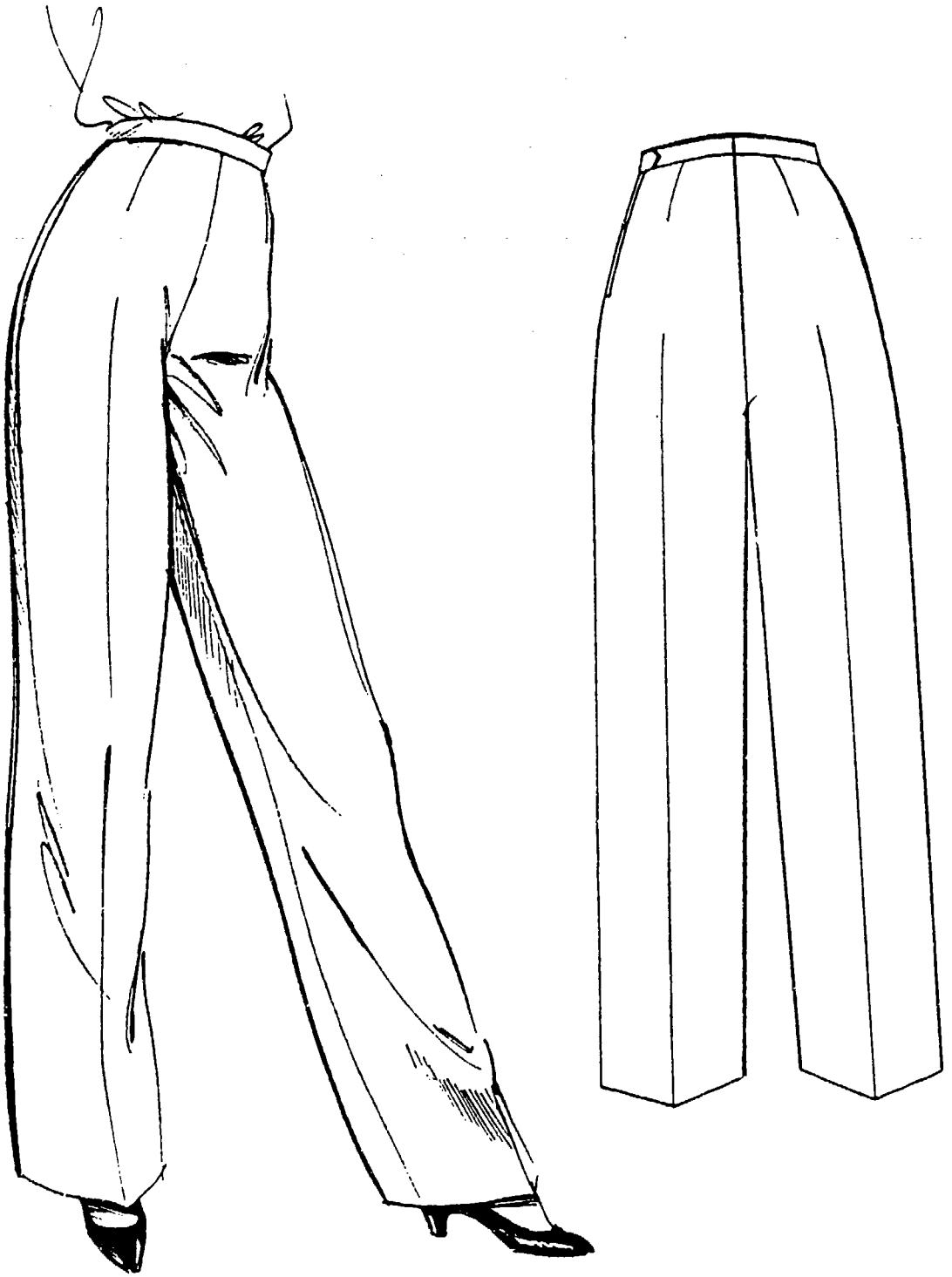
4.1.3 Women's Blue Dress Slacks (Figure III).

- The slacks were designed to lie flat over the hips with most of the shaping at the back of the figure. The new anthropometric data suggested that the thighs of Navy female personnel were relatively heavy. By giving more room for the legs at the back we were able to maintain a flatteringly slim silhouette that, nevertheless, allowed comfortable room for movement.

- Extra seam allowance was provided at the center back, and the waistband was split so that waistline alteration, if necessary, could be accomplished with ease.

- The legs are slightly tapered, but the general effect is of a straight, trim trouser.

FIGURE III: WOMEN'S BLUE DRESS SLACKS

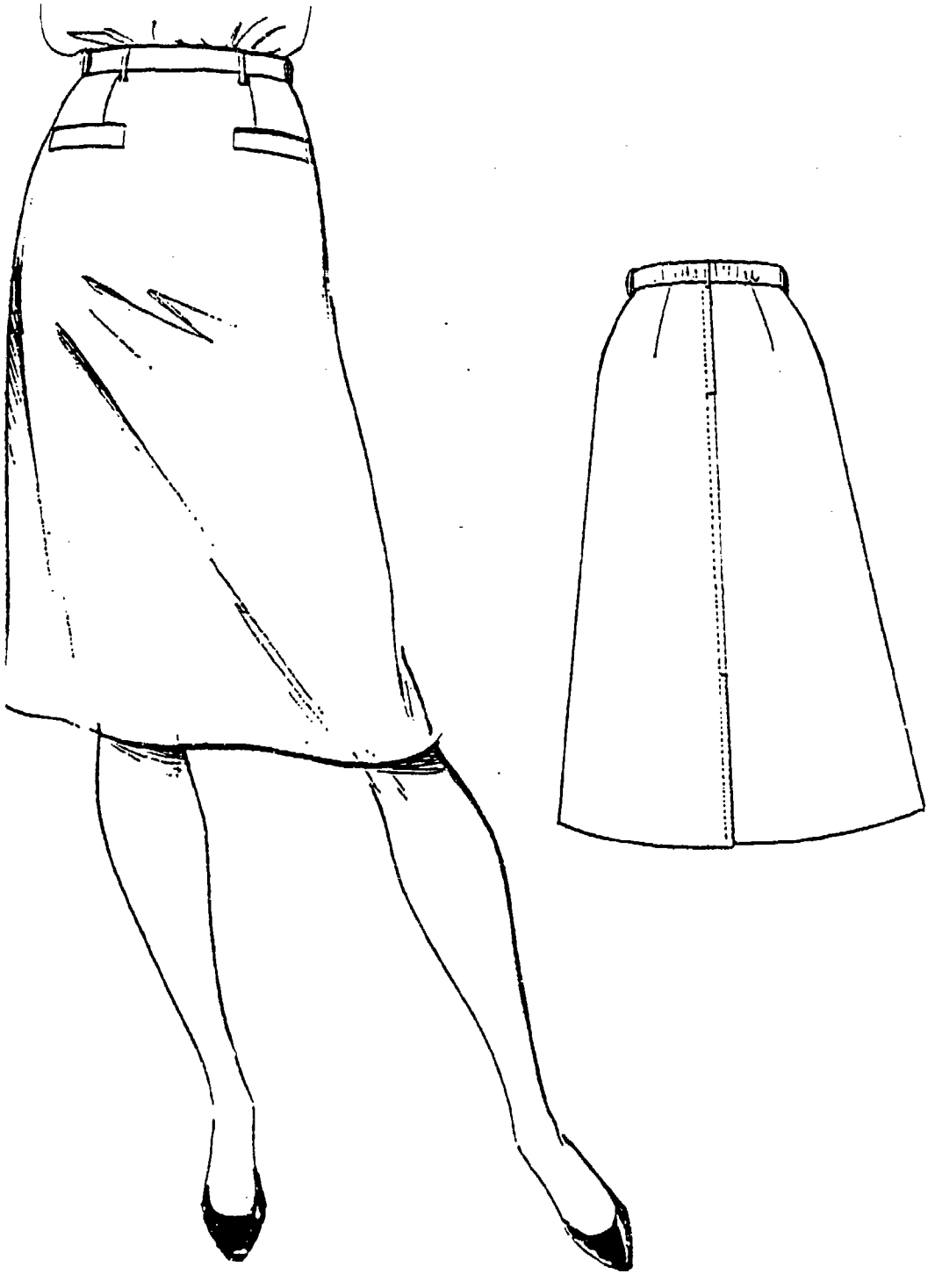


4.1.4 Women's White Belted Skirt (Figure IV).

- Elastic (**Paramount Trimming, #1036**) is inserted in two sections at the back of the skirt waistband to allow for variations of waistline measurements.

- The silhouette of this comfortable skirt is essentially slim, with a slight flare for walking ease. Elimination of the simulated flat felled side seams also contributes to the softer drape of the skirt.

FIGURE IV: WOMEN'S WHITE BELTED SKIRT



4.1.5 Women's White Belted Slacks (Figure V).

- These slacks have been re-designed so that the basic shape is similar to the shape of the Blue Dress Slacks.

- The generous center back seam allowance and split waistband construction also offer ease of alteration where required.

FIGURE V: WOMEN'S WHITE BELTED SLACKS

4.2 GARMENT SIZES.

All garments were made in the sizes as indicated in Figure VI.

FIGURE VI: GARMENT SIZES

SIZES	JUNIOR	REGULAR	WOMEN'S
4 PETITE		X	
4 REGULAR		X	
4 TALL		X	
6 PETITE		X	X
6 REGULAR		X	X
6 TALL		X	X
8 PETITE		X	X
8 REGULAR		X	X
8 TALL		X	X
10 PETITE	X	X	X
10 REGULAR	X	X	X
10 TALL	X	X	X
12 PETITE	X	X	X
12 REGULAR	X	X	X
12 TALL	X	X	X
14 PETITE	X	X	X
14 REGULAR	X	X	X
14 TALL	X	X	X
16 PETITE	X	X	X
16 REGULAR	X	X	X
16 TALL	X	X	X
18 PETITE		X	X
18 REGULAR		X	X
18 TALL		X	X
20 PETITE		X	
20 REGULAR		X	
20 TALL		X	

4.3 PATTERNS.

Since the Gerber AM-5 system installations at F.I.T. are in virtually continuous use by students, the original patterns that had been developed manually were digitized into the Gerber Accu Mark 300 system for grading according to the data provided by NCTRF. Subsequently, markers for cutting the prototypes were also generated by the Accu Mark system. The Accu Mark tape of all graded patterns was then converted to Gerber AM-5 system magnetic tape for delivery to NCTRF as required by the contract.

4.4 DESCRIPTION OF MANUFACTURING METHODS AND SEQUENCES.

The Construction Sequences and Method Descriptions for the Navy Women's Dress Uniform items which follow are recommendations, not approved specifications. The charts list manufacturing methods in their operational sequence. There was no attempt made to describe how to perform the operations nor has any attempt been made to spec them out.

Women's uniform manufacturers should be able to utilize or upgrade to the several levels of construction methods described on the following pages. There is no one best way to manufacture these garments. Manufacturers will have to decide which combination of mechanized sewing, pressing, and in-process material handling systems best suit their overall production plans.

The project team can only make future manufacturers aware of the possibilities and the benefits that can be gained when advanced apparel manufacturing technologies are used. All equipment and the methods described in the attached charts have been tested on actual garments under construction. Only off-the-shelf, readily available equipment is recommended and is expected to offer a reasonable return on investment. Automatic waistband setters, although not discussed in the recommendations, have good potential application for skirts and slacks. As regards automatic label feeders, they are costly additions to programmable tackers that have to be able to handle a variety of label sizes and thicknesses. Based on the project personnel's experience, the Pulwell, or a similar label separator, is a simple gadget that costs only a fraction of what the automatic label feeders cost, and it can pay for itself in only a few weeks.

The Navy Women's Dress Uniform garments that were developed in this project lend themselves very well to a Unit Production System. However, different manufacturers will probably load their systems at different points in the production cycle. The device developed by the Clemson Apparel Research Center that automatically replaces the garment parts into the carriers should also be considered. This might reduce handling time and make the Unit Production System even more cost effective.

Our recommendations are not limited to equipment and material handling. Other suggested innovations for each garment are also described.

4.4.1 Women's Blue Dress Coat. Production of the Women's Blue Dress Coat is a relatively complex procedure that does not lend itself to fully automated sewing equipment. For example, operations such as the joining of side seams cannot currently be accomplished on automatic side seamers because of the curvature of the garment parts. However, this does not mean that the dress coat can only be produced by traditional methods. The Construction Sequence and Method Description I, U.S. Navy Women's Blue Dress Coat, shows that the production cycle can be speeded up considerably with the use of new and improved pieces of equipment.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION I
U.S. NAVY WOMEN'S BLUE DRESS COAT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
1) Cut all parts		Create markers on a CAD system such as: Gerber AM 5 or AccuMark 300 Micro Dynamics Lectra Corp. Spread either face-one-way, or face to face with an automatic spreading machine. Cut fabric with a computer controlled cutter such as: Gerber High Ply Cutter Lectra High Ply Cutter	Create markers either manually or on a CAD system. Spread fabric manually or with an automatic spreading machine. Cut manually.
2) Fuse all parts		Fuse parts on a belt fed fusing machine.	Parts can be fused on a clamp shell press. This requires more care because closing the top buck tends to shift the fusable material.
3) Join center back	301	This operation can be done on an automatic side closer fitted with a lockstitch machine, or an adapted programmable lockstitch fitted with a ply sensor, Zippy edgeguide attachment and stacker.	This operation has to be done manually on a lockstitch with or without an undertrimmer.
4) Join both side back panels to center back.	301	This operation is best done on a single needle programmable lockstitch with a ply sensor and a stacker that is triggered by the thread trimm.	This operation has to be done manually on a lockstitch with or without an undertrimmer.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION I
U.S. NAVY WOMEN'S BLUE DRESS COAT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
5) Join center and side front	301	Use a programmable lockstitch with a ply sensor.	This operation has to be done manually on a lockstitch with or without an undertrimmer.
6) Set stay tape to front and back armhole and back neck	301	This operation should be done a lockstitch needle feed machine. The presser foot should have a tape guide and the machine should be fitted with an automatic before and after tape cutter. Clinton Industries supplies such a cutter.	This operation can be done on a plain machine. However, a needle feed machine is better. This avoids stretching the bias section of the cut. The tape can be guided manually, but a presser foot with a tape guide will help. The tape will have to be cut with snips.
7) Underpress all seams open		Press all front and back seams open with a hand steam iron.	Press all front and back seams open with a hand steam iron.
8) Mark front flap location		With template mark flap location on left and right front.	With template mark flap location on left and right front.
9) Make front flaps	301	Flaps can be made on one of the several template guided automatic sewing units. These are supplied by companies such as Adler, Singer, and AMF.	Runstitch flaps on plain lockstitch with or without an undertrimmer.
10) Turn and press front flaps		A modified shirt cuff turner and press will work well.	Hand turn and press flaps.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION I
U.S. NAVY WOMEN'S BLUE DRESS COAT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
11) Serge raw edge of flap	503 or 504	Serge raw edge on an overlock machine with a chain cutter.	Serge raw edge on a overlock machine.
12) Set flaps to left and right front	301	Set flaps on premarked fronts with a programmable lockstitch with a ply sensor to read the end of the flap.	Set flaps on premarked fronts with a plain lockstitch, either with or without a threadtrimmer and backtack.
13) Set facing to left and right front	301	This operation can be done two ways. The slower method is to join the upper complex part of the front on a programmable machine such as the Mitsubishi PLK804 or Brother -MIM-LK3-B310-111 and then complete the rest of the joining operation with a programmable lockstitch machine. The quicker method is to use a template guided machine fitted with jigs that allow for fullness at the lapel section of the seam. AMF is one of the vendors that supplies such a unit.	Joining can be done on a plain lockstitch. However, a top feed machine will offer better control.
14) Turn front		Turn fronts manually.	Turn fronts manually.
15) Baste fronts	101 or 301	Baste front with a jump baster or edge baster.	Baste front with a jump baster, edge baster, or baste manually.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION I
U.S. NAVY WOMEN'S BLUE DRESS COAT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
16) Press fronts		Press fronts on programmable pressing machines set up in tandem for left and right front.	Press fronts on either a compressed air operated or manually operated pressing machine.
17) Join side seams and shoulder seams	301	Close seams with a programmable lockstitch with a ply sensor to read the end of the seams.	Close seams with a plain lockstitch, either with or without a thread trimmer and backtack.
18) Press seams open		This operation is done with a hand steam iron.	This is to be done with a hand steam iron.
19) Join undercollar	301	The joining seam is only a 3 1/4" seam and can be easily done on a programmable lockstitch programmed for that length seam. However, a programmable tacker set for this operation would be faster.	Can be done on a plain lockstitch machine or on one with a backtack capability and a thread trimmer.
20) Press seam open		This operation is done with a hand steam iron.	This is to be done with a hand steam iron.
21) Runstitch collar	301	This should be done on the same template lockstitch machine used for the front flaps in operation number 9.	Runstitch collar on a plain lock-stitch machine with or without a thread trimmer
22) Turn and press collar		The collar has to be turned manually and pressed with hand steam iron.	The collar has to be turned manually and pressed with hand steam iron.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION I
U.S. NAVY WOMEN'S BLUE DRESS COAT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
23) Set collar	301	Set collar with a programmable lockstitch machine.	Stitch collar to neck on a plain lockstitch machine with or without a thread trimmer.
24) Join sleeve underseam	301 or 401	Run sleeves on an automatic sideseamer described in operation # 4.	Join underseam on a plain lockstitch machine with or without a thread trimmer
25) Press seam open and set fusable to sleeve hem		Press seam and set fuseable with hand steam iron.	press seam and set fuseable with hand steam iron.
26) Close sleeve top seam	301 or 401	Run sleeves on an automatic sideseamer described in operation # 4.	Join underseam on a plain lockstitch machine with or without a thread trimmer
27) Press top seam open		Press seam open with a hand steam iron.	Press seam open with a hand steam iron.
28) Set sleeves	301	To control the proper easing in of the sleeve, use a programmable sleeve setter. Pfaff and Durkopp offer such a unit.	Sleeve can be set on a plain lockstitch. However, setting on a machine with a top feed is better. If available, a cylinder head machine should be used.
29) Set sleeve heads	301	This operation should be done on a triple feed machine with an edge cutter.	Can be done on a top feed or on a triple feed machine and then trimmed manually.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION I
U.S. NAVY WOMEN'S BLUE DRESS COAT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
30) Set shoulder pads	301 or 101	Set shoulder pads with a blindstitch tacker or a blindstitch felling machine.	Shoulder pads can be hand tacked to the coat, set with lockstitch felling machine.
31) Set label to right front lining	301	Set label with programmed label tacker, such as the Brother Lk3 or Mitsubishi PLK 804 combined with a label separator.	Set label with a plain lockstitch or one with a needle positioner and undertrimmer.
32) Set pocket to lining	301	This operation is best done on a programmable lockstitch machine.	Set pocket with a plain lockstitch or one with a needle positioner and undertrimmer.
33) Join lining complete	301	This operation is best done on a programmable lockstitch machine. Join center back, then side back and side front.	Join lining parts on a plain lockstitch or one with a needle positioner and undertrimmer.
34) Press lining seams open		Press seams with hand steam iron.	Press seams with hand steam iron.
35) Join top sleeves and under sleeves	301 or 401	The sleeves can be joined on an automatic side closing machine. The machine has to be programmed to leave an opening on the inseam of one sleeve for turning the coat. If an automatic side closer is not available a programmable lockstitch can be used.	Join sleeve parts on a plain lockstitch or one with a needle positioner and undertrimmer.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION 1
U.S. NAVY WOMEN'S BLUE DRESS COAT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
36) Press sleeve seams open		Press seams with hand steam iron.	Press seams with hand steam iron.
37) Set lining sleeves to lining and set hanger loop	301	Set sleeves to body lining with a top feed machine so that the proper easing in of the sleeves can be programmed in. Tack hanger loop with the same unit.	Set sleeves to body lining on a lockstitch or one with a needle positioner and undertrimmer.
38) Set lining to shell complete and tack lining to shell seam allowances	301	Join lining body to shell complete and join sleeves at cuffs on a programmable lockstitch machine. Program machine for a short 4 bar in line tack for tacking the lining to shell at cuff, jacket hem, neck, and armholes.	Set lining to the shell on a plain lockstitch or one with a needle positioner and undertrimmer.
39) Turn jacket trough opening in the sleeve lining		This is a manual operation.	This is a manual operation.
40) Close opening in sleeve lining	301	This is best done on a programmable lockstitch machine programmed for opening length and a bartack at start and finish.	Close opening in sleeve lining on a plain lockstitch or one with a needle positioner and undertrimmer.
41) Make button holes	401	Make button holes on a cut first machine fitted with an indexer.	Make button holes on a cut first machine or sew them manually.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION I
U.S. NAVY WOMEN'S BLUE DRESS COAT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
42) Tack collar points tc lapel	301	Tack collar points to lapel on a blindstitch tacker of the type supplied by Union Special.	If no blindstitch tacker is available then this operation has to be done manually.
43) Press jacket ccmplete		Press jacket on programmable pressing machines with appropriate bucks	Press jacket on pressing machines with appropriate bucks.
44) Set buttons	201	Set buttons on a machine that simulates hand sewing, such as the AMF or Juki buttonsewers.	Sew buttons to jacket manually.

4.4.2 Women's Blue Dress Skirt. This skirt is an easy garment to produce; see Construction Sequence and Method Description II, U.S. Navy Women's Blue Dress Skirt. The fabrics, both shell and lining, are stable and can be easily handled by automatic machinery.

A woven fusible interlining (Crown Textile Company, #451/190B 66 BLEACHED) was used for the waistbands of the prototypes. However, for production it is less costly and more efficient to use a non-woven slotted waistband interlining such as Q.S.T. Industries' Edge Control, US121. The distance between the rows of slots depends on the design of the waistband. For this skirt the rows of slots should be spaced according to the seam allowance and width of the waistband, 3/8" and 1-1/4", respectively.

Using a non-woven slotted waistband interlining eliminates the cutting of this part. Since the pocket welts are also a fixed width, the same operation can be eliminated here by using a non-woven fusible interlining, such as produced by Pellon, and slit to the proper width. Both waistband and pocket welt interlining can then be cut to length on an automatic tape cutter such as Sunbrand Corporation's Ace Strip Cutter, Model C-150N.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION II
U.S. NAVY WOMEN'S BLUE DRESS SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
1) Cut all parts		Create markers on a CAD system such as: Gerber AM 5, AccuMark 300 Micro Dynamics Lectra Corporation Spread face one way on automatic spreader with knife box such as: CRA Corp. SME Corp. Gerber Garment Tech. Cut garment parts on a computer controlled cutter such as : Gerber High Ply Cutter Lectra High Ply Cutter	Make markers manually or on one of the system listed in the left column Spread fabric either manually or with one of the several available spreading machines. Cut manually
2) Fuse Non-woven slotted interlining waistband Fuse interlining to pocket welts		Slotted 3/8", 1 1/4", 1 1/4", 3/8" non-woven interlining eliminates the cutting of the fuseable and helps to make waistband faster and more accurately. There are several waistband fusing machines available, but any continuous fusing press will work well for the waistband and the pocket welts	Cut fuseable interlining manually and set it on a press with a flat buck.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION II
U.S. NAVY WOMEN'S BLUE DRESS SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
3) Serge the six skirt panels	503 or 504	The Union Special 2800B-5 fully automatic serger is the most efficient method. An operator can serge 1000+ skirts a day with a three unit set-up. Single automatic sergers can produce about 400 skirts in an eight hour day. The semi-automatic units listed below can also be used for serging panels and for the parts listed in operation # 4.	Can be done manually on any two-thread overlock machine, or on the semi-automatic units listed in the left column.
4) Serge waistbands Zipper placket Shell fabric pocket parts	503 or 504 or 602	The vendors of such equipment are: Beisler Co. Brother Co. Pfaff USA	Can be done manually on any two-thread overlock machine, or on the semi-automatic units listed in the left column.
5) Set non-slip waistband tape and elastic	301	Set tape to waistband on a programmable lockstitch machine with a ply sensor. Use a raising foot for tape and edge guide for waistband. Raw ends of tape have to be folded under and sewn down. Elastic is tacked at each end and between notches.	Set tape to waistband on a plain lockstitch, or a machine that has a needle positioner and undertrimmer. Use a raising presser foot for tape. Raw ends must be folded under and sew down. Elastic is tacked at each end and between notches.
6) Fold and seam each end of the pocket welts	301	Set a programmable lockstitch for width of the welts and close ends.	Sew ends with a plain lockstitch or one with an undertrimmer.
7) Trim corners and turn welts		Use adapted air operated cuff turner, or air operated collar point turner.	Hand turn on a manual collar point turner.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION II
U.S. NAVY WOMEN'S BLUE DRESS SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
8) Press welts		Hand steam iron unless a cuff press is used.	Hand steam irons are used for this operation.
9) Set skirt label to right pocket part	301	To be set on a programmable tacker such as the Brother LK3-B310 or a programmable lockstitch machine with a ply sensor.	Can be set with a plain lockstitch or with a machine that has a needle positioner and undertrimmer.
10) Join front skirt gores	301 401	An automatic side closer such as the Durkopp DAP6-345 offers a high rate of production, especially if the center gore is prematched with a side gore.	The gores can be joined on a lockstitch or a two thread chain stitch, preferable with chain cutters.
11) Press seams open		Hand steam irons are used for this operation.	Hand steam irons are used for this operation
12) Join back skirt gores	301 401	An automatic side closer such as the Durkopp DAP6-345 offers a high rate of production, especially if the center gore is prematched with a side gore.	The gores can be joined on a lockstitch or a two thread chain stitch, preferable with chain cutters.
13) Press seams open		Hand steam irons are used for this operation.	Hand steam irons are used for this operation.
14) Mark for front pockets		Use prepared pattern stencil for pocket location.	Use prepared pattern stencil for pocket location.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION II
U.S. NAVY WOMEN'S BLUE DRESS SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
15) Set welt pockets	301 101	The Beisler 100/30 and Juki APW-236 or a similar machine from other vendors offer the best results. The skirt front is positioned under the clamp, then the pocket welt is placed in the left clamp, and the self material part of the pocket bag is placed into the right clamp. The machine takes over from there.	Set pocket welt either on a plain lockstitch or one with an automatic backtack and undertrimmer. Make slit by hand. Set front and back pocket bag to assembly with the same machine.
16) Set front pocket bag	301	Join front pocket bag to seam allowance of pocket welt and turn pocket bag panels through slit	
17) Press pocket welts		Hand steam irons are used for this operation.	Hand steam irons are used for this operation.
18) Close pocket bags	512 515	Join the three plys of the pocket on an overlock with the listed stitch type fitted with a chain cutter.	Join three plys of the pocket bag as stated in the left column or close first on a single needle lock stitch and the use an overlock to finish the edges of the pocket bag.
19) Topstitch each end of the pocket welt	301	Topstitch 1/16" the ends of the pocket welts with a programmable lockstitch set for the right length	Topstitch 1/16" the ends of the welts with a plain lockstitch or one with and undertrimmer.
20) Close left side seam	301 401	While this operation can be done on the automatic side closer listed in operation # 10 and # 12, it must be remembered to reset the machine for a 1" seam allowance. The seam has to be closed from the zipper notch to the hem.	Close side from zipper notch either with plain single needle lock stitch or single needle two thread chain stitch with or without an undertrimmer.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION II
U.S. NAVY WOMEN'S BLUE DRESS SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
21) Set zipper and zipper placket	301	Set zipper to folded placket with a lockstitch that has an automatic backtack and undertrimmer. Then set assembly to skirt as shown in the specifications.	The operation can be done in the same manner as stated in the left column with a plain lockstitch machine.
22) Press side seam open		Hand steam irons are used for this operation.	Hand steam irons are used for this operation.
23) Close right skirt side		While this operation can be done on the automatic side closer listed in operation # 10 and # 12, the machine must be reset to a 1" seam allowance.	Close side from zipper notch either with plain single needle lock stitch or single needle two thread chain stitch with or without an undertrimmer.
24) Press side seam open		Hand steam irons are used for this operation.	Hand steam irons are used for this operation.
25) Serge all six lining gores	503	The lining gores can be serged on the Union Special 2800B-5 automatic serger or on a semi-automatic unit like the Brother BAS-102.	Serge gores manually on a two thread overlock machine. Do not cut off any material.
26) Join front and back gores.	301 401	Join front three gores and back three gores on a machine like the Durkopp DA06-345 automatic side seamer.	Close side from zipper notch either with plain single needle lock stitch or single needle two thread chain stitch with or without an undertrimmer

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION II
U.S. NAVY WOMEN'S BLUE DRESS SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
27) Join left and right side seam	301 401	Join sides on a Durkopp DAP6-345 or similar unit. Machine must be set for a 1" seam allowance. Left seam starts at the zipper notch.	Close left side from starting from the zipper notch and the entire right side on a lockstitch or on a single needle two thread chain stitch with or without an undertrimmer.
28) Clean edge hem sides of zipper slit	301 401	Use swing-out 3/16" hemmer on a a programmable lockstitch. Hem one side of the slit, pivot and sew across seam and then hem second side of the slit.	Use a swing-out 3/16" hemmer on a plain lockstitch machine, or on one with an undertrimmer
29) Press all six lining seams		Use steam iron and the appropriate buck to press seams open.	Use steam iron and the appropriate buck to press seams open.
30) Set lining to shell and set hanger loops	301	This operation is done on a single needle top feed or needle feed lockstitch machine with positioner and undertrimmer. 1/4" seam allowance.	Plain needle or top feed lockstitch with or without positioner and undertrimmer.
31) Set waistband to skirt and insert size label	301 401	A top feed or needle feed with a positioner and undertrimmer is the best machine. 3/8" seam allowance.	Plain needle or top feed lockstitch with or without positioner and undertrimmer. 3/8" seam allowance.
32) Set hook to left front waistband extension	301	This is done on a programmable tacker, such as the Brother LK3-B310-111. It can also be done on a converted lockstitch tacker.	The hook can be sewn on manually, on a converted lockstitch tacker with a special clamp.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION II
U.S. NAVY WOMEN'S BLUE DRESS SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
33) Fold waistband ends and close extensions	301	Fold ends of waistband and make L shaped seam with a programmable lockstitch machine.	Fold ends of waistband and make L shaped seam with a plain machine with or without an undertrimmer.
34) Trim corners of the waistband extensions		Hand trim and use an air operated collar-point turner to turn extensions.	Manually trim and turn extensions.
35) Fold and topstitch waistband, 1/16"	301	Topstitch waistband complete with a needle feed lockstitch with a 1/16" raising presser foot and needle positioner and undertrimmer.	Topstitch waistband complete on a plain machine or with needle feed machine with 1/16" raising foot.
36) Tack eye to left back waistband	301 101	This can be done on a buttonsewer with a special clamp, or a converted lockstitch tacker.	The eyes can be sewn on manually or with buttonsewer with a special clamp.
37) Inspect and turn skirt		Manual inspection and turning.	Manual inspection and turning.
38) Press complete skirt		Programmable press set up in tandem.	Pressing machine with set up for skirt pressing.
39) Tack paper label to front waistband	101	The Reece label tacker with an indexer, or the Chandler double needle label tacker with a Galkin label feeder will work well for this operation.	A Reece label tacker or a buttonsewer set for six stitches can be used for this operation.

4.4.3 Women's Blue Dress Slacks. This is the least complicated of the five garments developed under this project; see Construction Sequence and Method Description III, U.S. Navy Women's Blue Dress Slacks. The stability of the fabric and the simplicity of garment design make the use of automated equipment very desirable. If the recommendation for using non-woven slotted waistband interlining, such as Q.S.T. Industries' Edge Control, US121, is accepted, the producer only needs to inventory the base fabric for this product. The only other component to be cut is the non-slip waistband tape, such as Q.S.T. Industries' Duo Stripe Snug Tex, and that can be cut on the same tape cutter, such as Sunbrand Corporation's Ace Strip Cutter, Model C-150N, which was described for the Women's Blue Dress Skirt (sec. 4.4.2).

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION III
U.S. NAVY WOMEN'S BLUE DRESS SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
1) Cut all parts		Create markers on a CAD system such as: Gerber AM 5, AccuMark 300 Micro Dynamics Lectra Corporation Spread face one way on automatic spreader with knife box such as: CRA Corp. SME Corp. Gerber Garment Tech. If spread face to face than the right front zipper extension has to be trimmed off. Cut garment parts on a computer controlled cutter such as : Gerber High Ply Cutter Lectra High Ply Cutter	Make markers manually or on one of the system listed in the left colum Spread fabric either manually or with one of the several available spreading machines. Cut manually
2) Fuse Non-woven slotted interlining to right and left waistband		Slotted 3/8", 1 1/4", 1 1/4", 3/8" non-woven interlining eliminates the cutting of the fuseable and helps to make waistband faster and more accurate. There are special waistband fusing machines, but any continuous fusing press will work well.	Cut fuseable interlining manually and set it on a press with a flat buck.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION III
U.S. NAVY WOMEN'S BLUE DRESS SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
3) Serge the four leg panels	503 or 504	The Union Special 2800B-5 fully automatic serger is the most efficient method. An operator can serge a 1000+ slacks a day with a three unit set-up. Single automatic sergers can produce about 400 slacks in an eight hour day. The left front panel can only be done on three sides, the zipper side has to be done manually or on a machine listed below.	Has to be done manually on any two thread overlock machine, or on the semi-automatic units listed for in left column under operation number 4.
4) Serge waistbands, pocket zipper placket	503 or 504 or 602	Use a semi-automatic units such as: Beisler Brother Pfaff	Has to be done manually on any two thread overlock machine, or on the semi-automatic units listed in the left column.
5) Make darts	301	At this point the slack parts can be loaded onto a Unit Production system. However, if the company uses an automatic side closing machine it might be best to load the UPS after operation # 12. If the company uses an automatic side closer then it is best to use the waterfall method and place stack of the leg panels into clamp trucks for dart closing. Use an automatic dart tacker such as supplied by Durkopp or Brother Machine co.	Either use programable lockstitch or plain lockstitch machine.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION III
U.S. NAVY WOMEN'S BLUE DRESS SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
5) Make dart continued	301	The waterfall method can also be used in conjunction with a with programmable lockstitch machine. The length of the dart can be pre-programmed and recalled as needed. Do not remove stack from clamptruck.	
6) Press darts		With leg panels still on clamp truck press darts as stated in the appropriate Mil-Specifications	Press darts as stated in the appropriate Mil- Specifications.
7) Attach label to pocket bag	301	Set label to pocket on a programmable tacker such as the Brother or Mitsubishi units and a compressed air operated label separator. Label can also be set on programable lockstitch machine, but that method is slower.	Set label with a programmable lockstitch or on a plain lockstitch machine
8) Set pocket	301	With right front leg panels still on the clamptruck set, topstitch, and close pocket with a pro-grammable lockstitch machine. All seams are 4 1/4" long.	Set pocket with a programmable lockstitch or on a plain lockstitch machine
9) Join outseams	301 or 401	The best level of machine utilization is achieved when the front and back panels are fed to the machine operator in pre-matched stacks. The operator positiones the pre-matched set on the automatic side seamer, activates the unit and then reaches for the next set.	Close outseams on lockstitch or 401 stitch machines with or without needle positioners and undertrimmers.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION III
U.S. NAVY WOMEN'S BLUE DRESS SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
9) Join outseam continued		The left side is closed from the zipper notch and the right side from the top edge. Automatic side closers are available from Durkopp, Porter, and Pfaff.	
10) Set slide fasteners	301	Set slide fasteners as described in the Mil-Specifications using a programmable lockstitch machine.	Set slide fasteners as described in the Mil-Specifications using either a programmable or plain lockstitch machine
11) Join inseam	301 or 401	Use the same automatic side seamer that was used for the outseams	Use the same equipment that was used for the outseams
12) Press out and inseam		Use a legger with a steam hand iron and press both seams open and flat.	Use a legger with a steam hand iron and press both seams open and flat. If legger is not available than out and inseam must be sewn and pressed one at the time. This means double handling.
13) Join front seam	301 or 401	At this point the garment parts can be matched and loaded onto a Unit Production System, or the matched bundles can be loaded onto a clamp truck. Both methods will move the garments through the manufacturing process until they are ready for final press. Join front on a machine fitted with a needle positioner and undertrimmer.	Join front on a machine fitted with a needle positioner and undertrimmer, or a plain machine.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION III
U.S. NAVY WOMEN'S BLUE DRESS SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
14) Press seam open		Press seam open on a board and with hand steam iron.	Press seam open on a board and with hand steam iron.
15) Set Non-Slip Waistband Tape	301	Set tape to right and left waistband on a programmable lockstitch machine with a ply sensor. Use a raising presser foot for tape and edge guide for waistband. Raw ends of tape have to be folded under and sewn down.	Set tape to right and left waistband on a plain lockstitch, or a machine that has a needle positioner and undertrimmer. Use a raising presser foot for tape. Raw ends of tape have to be folded under and sewn down.
16) Set waistband extension hooks	301	One of the previously listed programmable tackers fitted with the proper clamp will set the hook as will any specially adapted lockstitch tacker.	Hand set the hooks or use a converted bar tack machine.
17) Attach left and right waistband	301	Set waistbands with, either a top feed or needle feed lockstitch machine with needle positioner and undertrimmer. Slots 3/8" from the raw edge of the interlining is the seam line	Set waistband with an edge guide on a plain lockstitch machine, or a machine with and undertrimmer.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION III
U.S. NAVY WOMEN'S BLUE DRESS SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
18) Sew out waistband extension	301	Fold left front waistband along centerline of slots in the waistband interlining and make L shaped seam with a programmable lockstitch machine.	Fold left waistband extension in half and close extension with a plain lockstitch machine, or one that has a needle positioner and undertrimmer.
19) Join back rise	401	Use a double needle 401 stitch machine with the needle spacing of no more than 1/32"	Use a double needle 401 stitch machine with the needle spacing of no more than 1/32"
20) Press back rise	301	Press seam open and flat with a hand steam iron on a board.	Press seam open and flat with a hand steam iron on a board.
21) Turn waistband extension and topstitch waistband	301	Trim and turn extension. Fold waistband along center slots in waistband interlining. Topstitch with a 1/16" raising presser foot. Start at center fold of waistband extension and sew along fold first and then sew completely around waistband. Use a lockstitch machine with needle positioner and undertrimmer.	Trim and turn extension. Fold waistband in half and topstitch along fold. Proper waistband width has to be maintained. Topstitch completely around the waistband. Use, either a plain lockstitch machine, or one fitted with an undertrimmer.
22) Set waistband eyes	101 or 301	Set waistband eyes on a buttonsewer fitted with a special clamp.	Hand sew eyes to waistband, or use machines listed in left column.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION III
U.S. NAVY WOMEN'S BLUE DRESS SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
23) Examine, trim and turn garment		Unload Unit Production System or remove bundle from clamp truck. Examine and trim inside of garment. Turn garment on a pants turner and then examine and trim exterior of garment.	Examine and trim inside of slacks. Hand or machine turn slacks and examine and trim exterior.
24) Press slacks		Press slacks on programmed pressing machines	Use manual or air operated pressing machines
25) Tack the removeable size ticket	101	Use a double needle chandler label tacker, 3/4" guage, or the Reece automatic label tacker	Tack each corner with buttonsewer set for six stitch two hole buttons machine

4.4.4 Women's White Belted Skirt. This three-gore skirt is the problem garment of the group; see Construction Sequence and Method Description IV, U.S. Navy Women's White Belted Skirt. The fabric drapes well, but is difficult to handle. The shell parts can be serged on an automatic serger, but not the lining. The tricot knit fabric of the lining tends to curl at the cut edges and does not present a guidable edge. This means that all the lining parts have to be manually serged, a slow and tedious task since the operator has to uncurl the edges as the fabric is fed through the sewing machine. To hem the edges of the zipper slit and vent is equally difficult.

An automatic pocket welter, such as Beisler Pocket Welting Machine 100/35, can easily handle the welts of this skirt, but cannot handle the pocket bags of the lining fabric. This requires an extra step in setting and making the pockets. We recommend that a better, more workable lining fabric be considered. Most likely, the increase in fabric cost will be offset by a reduction in labor cost.

The shell fabric of this skirt reacts to heat and, therefore, an allowance has to be built into the waistband length for the shrinkage that will occur during the fusing process. The feeding systems of the various sewing machines have to be carefully set to avoid stretching and puckering of the shell fabric. The most likely area where this will occur is at the center back zipper setting and topstitching.

We also recommend that the belt loops be set with an automatic belt loop setter, such as Juki's MOL-103P, configured for the jeans-type belt loop. This offers a very good quality stitch and allows rapid performance of this task.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION IV
U.S. NAVY WOMEN'S WHITE BELTED SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
1) Cut all parts		Create markers on a CAD system such as: Gerber AM 5, AccuMark 300 Micro Dynamics Lectra Corporation Spread face one way on automatic spreader with knife box such as: CRA Corp. SME Corp. Gerber Garment Tech. Cut garment parts on a computer controlled cutter such as : Gerber High Ply Cutter Lectra High Ply Cutter	Make markers manually or on one of the systems listed in the left column Spread fabric either manually or with one of the several available spreading machines. Cut manually
2) Fuse Non-woven slotted interlining waistband Fuse interlining to pocket welts		Slotted 3/8", 1 1/4", 1 1/4", 3/8" non-woven interlining eliminates the cutting of the fuseable and helps to make waistband faster and more accurately. There are several waistband fusing machines available, but any continuous fusing press will work well for the waistband and the pocket welts	Cut fuseable interlining manually and set it on a press with a flat buck.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION IV
U.S. NAVY WOMEN'S WHITE BELTED SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
3) Serge the three skirt panels	503 or 504	The Union Special 2800B-5 fully automatic serger is the most efficient method. An operator can handle up to three units. The center back side with the vent cut-out has to be done manually, or can be done on one of the Semi automatic units listed for operation # 4.	Can be done manually on any two-thread overlock machine, or on the semi-automatic units listed in the left column.
4) Serge waistbands	503 or 504 or 602	Use a semi-automatic unit, such as listed below: Beisler Brother BAS-102 Pfaff	Can be done manually on any two-thread overlock machine, or on the semi-automatic units listed in the left column.
5) Set Non-Slip Waistband Tape and Elastic	301	Set tape to waistband on a programmable lockstitch machine with a ply sensor. Use a raising foot for the tape and an edge guide for the waistband. Raw ends of tape have to be folded under and sewn down. Elastic is placed between notches and tacked at each end.	Set tape to waistband on a plain lockstitch, or a machine that has a needle positioner and undertrimmer. Use a raising presser foot for tape. Raw ends must be folded under and sew down. Elastic is placed between notches and tacked at each end.
6) Fold and seam each end of the pocket welts	301	Set a programmable lockstitch for width of the welts and to close ends.	Sew ends with a plain lockstitch or one with an undertrimmer.
7) Trim corners and turn welts		Use an adapted air operated cuff turner, or an air operated collar point turner.	Hand turn on a manual collar point turner.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION IV
U.S. NAVY WOMEN'S WHITE BELTED SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
8) Press welts		Hand steam iron unless a cuff press is used.	Hand steam irons are used for this operation.
9) Set skirt label to right pocket part	301	To be set on a programmable tacker such as the Brother LK3-B310 or a programmable lockstitch machine with a ply sensor.	Can be set with a plain lockstitch or with a machine that has a needle positioner and undertrimmer.
10) Set darts to front and back	301	Place front and back panels on individual clamp trucks, clamped at the hem. Then sew darts on an automatic dart tacker which can be adjusted for different length darts such as the Durkopp machine, or Juki. If an automatic tacker is not available then a programmable lockstitch. The length of the dart can be preprogrammed and recalled as needed.	Either a programmable lockstitch or a plain lockstitch with or without an undertrimmer can be used for this operation.
11) Press front and back darts		Hand steam irons are used for this operation.	Hand steam irons are used for this operation.
12) Hem right vent	301	Hem right back at vent using a lockstitch machine fitted with an upturn 1/4" clean edge hemmer.	Same as stated in left column.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION IV
U.S. NAVY WOMEN'S WHITE BELTED SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
13) Join back panels from from zipper end to vent top	301	While this operation can be done on an automatic side closer, doing it on a programmable lockstitch will be almost as efficient.	The operation can be done on a lockstitch with or without an undertrimmer.
14) Set zipper to center back and topstitch center back seam	301	This manual operation is done on a programmable lockstitch machine. The topstitch is 1/2".	The operation can be done on a lockstitch with or without an undertrimmer.
15) Mark for front pockets		Use prepared pattern stencil for pocket location.	Use prepared pattern stencil for pocket location.
16) Set welt Pockets	301 or 101	The Beisler 100/30 and Juki APW-236 or similar machine from other vendors offer the best results. The skirt front is positioned under the clamp, then the pocket welt is placed into the left clamp, and the self material part of the pocket bag is placed into the right clamp. The machine takes over from there.	Set pocket welt either on a plain lockstitch or on one with an automatic backtack and undertrimmer. Make slit by hand. Set front and back pocket bag to assembly with the same machine.
17) Set front pocket bag	301	Join front pocket bag to seam allowance of pocket welt on a programmble lockstitch machine and turn pocket bag panels through slit.	Follow the same procedure as stated in left column with the machine listed in the step above.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION IV
U.S. NAVY WOMEN'S WHITE BELTED SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
18) Press pocket welts		Hand steam irons are used for this operation.	Hand steam irons are used for this operation.
19) Close pocket bags	512 515	Join the three plys of the pocket on an overlock with the listed stitch type and chain cutter.	Join three plys of the pocket bag as stated in the left column or close first on a single needle lockstitch.
20) Topstitch each end of the pocket welt	301	Topstitch 1/16" the ends of the pocket welts with a programmable lockstitch set for the right length	finish the edges of the pocket bag Topstitch 1/16" the ends of the welts with a plain lockstitch or one with and undertrimmer.
21) Join front to back	301 401	This operetion can be done on an automatic side closer such as the Durkopp DAP6 345 or similar unit. It must be remembered to set the machine to 1" seam allowance.	Close sides either with a plain single needle lockstitch or a single needle two thread chain-stitch with or without an undertrimmer.
22) Press side seam open		Hand steam irons are used for this operation.	Hand steam irons are used for this operation.
23) Serge the three lining gores	503	The handling quality of the lining material is such, that the serging has to be done manually on the appropriate two thread overlock machine.	Serge gores manually on a two thread overlock machine. Do not cut off any material.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION IV
U.S. NAVY WOMEN'S WHITE BELTED SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
24) Join center back lining from zipper notch to the top of vent.	301 401	Make center back seam with a programmable single needle lockstitch. This is a manual operation.	Make center back seam with a plain single needle lockstitch or single needle two thread chainstitch with or without an undertrimmer.
25) Press center seam open.		Hand steam irons are used for this operation.	Hand steam irons are used for this operation.
26) Topstitch zipper and vent slit	301	Topstitch the perimeter of both slits 1/4" with a single needle programmable lockstitch. This is a manual operation.	Topstitch the perimeter of both slits 1/4" with a plain single needle lockstitch with, or without an undertrimmer.
27) Join left and right side seam	301 401	Join front and back lining manually on a single needle programmable lockstitch, or on a single needle two thread chainstitch fitted with an undertrimmer and stitch tightner.	Join front and back lining with a plain single needle lockstitch or single needle two thread chainstitch with or without an undertrimmer.
28) Press lining side seams		Use steam iron and the appropriate buck to press seams open.	Use steam iron and the appropriate buck to press seams open.
29) Set lining to shell and set hanger loops	301	This operation is done on a single needle top or needle feed lockstitch machine with positioner and undertrimmer. 1/4" seam allowance.	Plain needle or top feed lockstitch with or without positioner and undertrimmer.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION IV
U.S. NAVY WOMEN'S WHITE BELTED SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
30) Set waistband to skirt and insert size label	301 401	A top or needle feed with a positioner and undertrimmer is the best machine. 3/8" seam allowance.	Plain needle or top feed lockstitch with or without positioner and undertrimmer. 3/8" seam allowance.
31) Set hook to left waistband extension	301	This is done on a programmable tacker, such as the Brother LK3-B310-111. It can also be done on a converted lockstitch tacker.	The hook can be sewn on manually, on a converted lockstitch tacker with a special clamp.
32) Fold waistband ends and close extensions	301	Fold ends of waistband and make L shaped seam with a programmable lockstitch machine.	Fold ends of waistband and make L shaped seam with a plain machine with or without an undertrimmer.
33) Trim corners of the waistband extensions		Hand trim and use an air operated collar-point turner to turn extensions.	Manually trim and turn extensions.
34) Fold and topstitch waistband, 1/16"	301	Topstitch waistband complete with a needle feed lockstitch with a 1/16" raising presser foot and needle positioner and undertrimmer.	Topstitch waistband complete on a plain machine or with needle feed machine with 1/16" raising foot.
35) Tack eye to left back waistband	301 101	This can be done on a buttonsewer with a special clamp, or a converted lockstitch tacker.	The eyes can be sewn on manually or with buttonsewer with a special clamp.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION IV
U.S. NAVY WOMEN'S WHITE BELTED SKIRT

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
38) Inspect and turn skirt		Manual inspection and turning.	Manual inspection and turning.
39) Press skirt complete		Programmable press set up in tandem.	Pressing machine with set up for skirt pressing.
40) Tack paper label to front waistband	101	The Reece label tacker with an indexer, or the Chandler double needle label tacker with a Galkin label feeder will set that label.	A Reece label tacker or a buttonsewer set for six stitches can be used for this operation.

4.4.5 **Women's White Belted Slacks**. This garment requires more production time than the blue dress slacks; see Construction Sequence and Method Description V, U.S. Navy Women's White Belted Slacks. The quarter top pockets and front fly add several operations. The fabric, however, is stable and presents no sewing problems.

The pockets in our samples were made of self fabric. This eliminated the need for separate cutting of pocketing. It also eliminated the cutting and setting of pocket facing. The reduction in labor operations and the elimination of facings should more than compensate for the differences in cost between the pocketing and self fabric. For the waistband we recommend the same waistband interlining (Q.S.T. Industries' Edge Control, US121) that was recommended for the other skirts and slacks.

It is recommended that consideration be given to setting the slack fly on the left side. This would allow the use of the Union Special fly topstitch machine, which reduces the skill required to perform this operation without any reduction in quality.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION V
U.S. NAVY WOMEN'S WHITE BELTED SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
1) Cut all parts		Create markers on a CAD system such as: Gerber AM 5, AccuMark 300 Micro Dynamics Lectra Corporation Spread face one way on automatic spreader with knife box such as: CRA Corp. SME Corp. Gerber Garment Tech. If spread face to face the right front zipper extension has to be trimmed off. Cut garment parts on a computer controlled cutter such as : Gerber High Ply Cutter Lectra High Ply Cutter	Make markers manually or on one of the system listed in the left colum Spread fabric either manually or with one of the several available spreading machines. Cut manually
2) Fuse Non-woven slotted interlining to right and left waistband		Slotted 3/8", 1 1/4", 1 1/4", 3/8" non-woven interlining eliminates the cutting of the fuseable and helps to make waistband faster and more accurate. There are special waistband fusing machines, but any continuous fusing press will work well.	Cut fuseable interlining manually and set it on a press with a flat buck.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION V
U.S. NAVY WOMEN'S WHITE BELTED SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
3) Serge the four leg panels	503 or 504	The Union Special 2800B-5 fully automatic serger is the most efficient method. An operator can serge a 1000+ slacks a day with a three unit set-up. Single automatic sergers can produce about 400 slacks in an eight hour day.	Can be done manually on any two thread overlock machine, or on the semi-automatic units listed in the left column.
4) Serge waistband	503 or 504 or 602	Use a semi-automatic unit such as: Beisler Brother BAS-102 Pfaff	FIRST GENERATION MECH. EQUIPMENT
5) Make darts	301	At this point the slack parts can be loaded onto a Unit Production System, but since parts have to be removed from the carrier for side side closing it might be adviseable to load the UPS after operation # 15. Then it is best to use the waterfall method and place a stack of leg panels on a clamp truck. Then sew darts on an automatic dart tacker which can be programmed for different length darts such as the: Durkopp or Juki ADV 332 which comes with a waterfall clamp system.	Either use programmable lockstitch or plain lockstitch machine.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION V
U.S. NAVY WOMEN'S WHITE BELTED SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
5) Make dart continued	301	The waterfall method can also be used in conjunction with a with programmable lockstitch machine. The length of the dart can be pre-programed and recalled as needed. Panels do not have to be removed from the clamptruck for pressing.	
6) Press darts		With leg panels still on clamp truck press darts as stated in the appropriate Mil-Specifications	Press darts as stated in the appropriate Mil- Specifications.
7) Attach label to pocket bag	301	Set label to pocket on a programmable tacker such as the Brother LK3-B310-111 and an air operated label separator such as Pulwell supplies. Label can also be set on programmable lockstitch machine, but that method is slower.	Set label with a programmable lockstitch or plain lockstitch machine
8) Set pockets	301	With front leg panels still in the clamp truck set left and right quarter top pockets. Turn and top-stitch 1/4". Complete pocket operation as listed in the specifications on a single needle programmable lockstitch machine.	Set label with a programmable lockstitch or plain lockstitch machine
9) Serge Pockets at the sideseams	503 or 504	This operation has to be done manually on the appropriate overlock machine with a chaincutter.	Not done differently than stated in column on left.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION V
U.S. NAVY WOMEN'S WHITE BELTED SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
10) Tack ends of pocket	301	Tack pockets with a compressed air activated bartack machine set for 1/4" tack.	Tack with a stardard 1/4" bartack machine.
11) Join outseams	301 or 401	With this operation the work has to be removed from the clamptruck. The best level of machine utilization is attained when the work is fed to the machine operator in pre-matched set for closing on the automatic side closer. A Durkopp DAP 6-345 or similar machine is recommended.	Close outseams on lockstitch or 401 stitch machines with or without needle positioners and undertrimmers.
12) Join inseam	301 or 401	Use the same automatic side seamer that was used for the outseams in operation # 11.	Use the same equipment that was used for the outseams in operation # 11.
13) Press out and inseam		Use a legger with a steam hand iron and press both seams open and flat.	Use a legger with a steam hand iron and press both seams open and flat. If legger is not available, the out and inseam must sewn and pressed one at the time. This means double handling.
14) Serge left and right fly parts.	503 or 504	Serge fly parts as stated in the specifications on an overlock machine with a chaincutter.	Serge fly parts on an overlock machine.
15) Set zipper to fly	301	Set zipper with a 3/16" guage double needle with automatic backtack and undertrimmer.	Set zipper with a single needle lockstitch with an undertrimmer.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION V
U.S. NAVY WOMEN'S WHITE BELTED SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
16) Set left and right fly to leg panels	301 or 401	At this point the garment parts can be matched and loaded onto a Unit Production System, or the matched bundles can be loaded onto a clamp truck. Both methods will move the garments through the manufacturing process until they are ready for final press. Set flys on a machine fitted with a needle positioner and undertrimmer.	Set flys on a machine fitted with a needle positioner and undertrimmer, or a plain machine.
17) Close front rise	301 or 401	Close front rise, either with a lockstitch machine with an undertrimmer, or with a 1/32" guage two needle two thread chainstitch machine.	Same as described in left column.
18) Press seam open		Press seam open on a board with hand steam iron.	Press seam open on a board with hand steam iron.
19) Set Non-Slip Waistband Tape	301	Set tape to right and left waistband on a programmable lockstitch machine with a ply sensor Use a raising presser foot for tape and edge guide for waistband. Raw ends of tape have to be folded under and sewn down.	Set tape to right and left waistband on a plain lockstitch, or a machine that has a needle positioner and undertrimmer. Use a raising presser foot for tape. Raw ends of tape have to be folded under and sewn down.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION V
U.S. NAVY WOMEN'S WHITE BELTED SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
20) Attach left and right waistband	301	Set waistbands with, either a top feed or needle feed lockstitch machine with needle positioner and undertrimmer. Slots 3/8" from the raw edge of the interlining is the seam line. Set size label to waistband.	Set waistband with an edge guide on a plain lockstitch machine, or a machine with and undertrimmer.
21) Set hook to waistband	301	One of the previously listed programmable tackers fitted with th proper clamp will set the hook as will any specially adapted lockstitch tacker.	Hand set the hooks or use a converted tar tack machine.
22) Sew out waistband extension	301	Fold left front waistband along centerline of slots in the waistband interlining and make an L shaped seam with a programmable lockstitch machine.	Fold left waistband extension in half and close extension with a plain lockstitch machine, or one that has a needle positioner and undertrimmer.
23) Join back rise	401	Use a double needle 401 stitch machine with the needle spacing of no more than 1/32"	Use a double needle 401 stitch machine with the needle spacing of no more than 1/32"
24) Press back rise	301	Press seam open and flat with a hand steam iron on a board.	Press seam open and flat with a hand steam iron on a board.
25) Turn waistband extension and topstitch waistband	301	Trim and turn extension. Fold waistband along center slots in waistband interlining. Topstitch with a 1/16" raising presser foot.	Trim and turn extension. Fold waistband in half and topstitch along fold. Proper waistband width has to be maintained. Topstitch

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION V
U.S. NAVY WOMEN'S WHITE BELTED SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
25) Topstitch waistband continued		Start at center fold of waistband extension and sew along fold first and then sew completely around waistband. Use a lockstitch machine with needle positioner and undertrimmer.	completely around the waistband. Use, either a plain lockstitch machine, or one fitted with an undertrimmer.
26) Set eye to waistband	or	Set waistband eyes on a buttonsewer fitted with a special clamp.	Hand sew eyes to waistband, or use machines listed in left column.
27) Topstitch right fly front	301	Topstitch fly with a lockstitch machine with automatic backtack and undertrimmer.	Topstitch with plain lockstitch or a machine with an undertrimmer.
28) Bartack fly	301	Place a 3/8" tack at the bottom of the fly at the end of the J top-stitch with a bartack machine.	Use the same machine as listed in left column.
29) Make Beltloop strips	301,401 or 406	Continuous strip fed through the appropriate folder and sewn on a two needle machine four thread (401), or two needle three thread (406) chainstitch machine set up for automatic sewing. The machine should be fitted with thread break detectors and material run-out detectors.	This work can be done manualy on a two needle lockstitch or chainstitch machines.

CONSTRUCTION SEQUENCE
AND METHOD DESCRIPTION V
U.S. NAVY WOMEN'S WHITE BELTED SLACKS

OPERATION DESCRIPTION	STITCH TYPE	METHOD DESCRIPTION - MAXIMUM USE OF ADVANCED MECHANIZED SYSTEMS	METHOD DESCRIPTION - MANUAL OR FIRST GENERATION MECH. EQUIPMENT
30) Set beltloops	304	Set loops with an automatic beltloop machine such as the Juki MOL-504P, which cuts the loop to length and than sets both ends.	The loop is either set with standard bartack machine or on a semi-automatic machine such as is supplied by the Galkin Corp., which requires precut loops.
31) Examine, trim and turn garment		Unload Unit Production System or remove bundle from clamp truck. Examine and trim inside of garment. Turn garment on a pants turner and then examine and trim exterior of garment.	Examine and trim inside of slacks. Hand or machine turn slacks and examine and trim exterior.
32) Press slacks		Press slacks on programmed pressing machines	Use manual or air operated pressing machines
33) Tack the removeable size ticket	101	Use a double needle chandler label tacker, 3/4" guage, or the Reece automatic label tacker	Tack each corner with buttonsewer set for six stitch two hole buttons machine

4.5 ADOPTIONS AND ADAPTATIONS.

As of the date of this report, NCTRF had not advised us of any decisions being reached regarding adoption of the recommended changes in the Navy Women's Dress Uniforms. The results of the fit tests at the U.S. Navy Training Center in Orlando, Florida during August 1990, indicated a preference for the new styling by both Navy women and evaluators. There were, however, some fit subjects who preferred the more traditional, close to the body styling of the garments that were submitted by the NCTRF staff.

A wear test that would permit women to become accustomed to the look, the comfort, and the feel of the new uniforms is recommended.

We anticipate that the accomplishments of this project will influence the construction, fit and evolving design of all service uniforms in the future.

APPENDIX I: PATTERN NUMBER DIRECTORY (MODEL FILES)

PATTERN NUMBER DIRECTORY
(MODEL FILES)

SIZE SUMMARY

REGULAR REGULAR	REGULAR TALL	REGULAR PETITE
4 R	4 RT	4 RP
6 R	6 RT	6 RP
8 R	8 RT	8 RP
10 R	10 RT	10 RP
12 R	12 RT	12 RP
14 R	14 RT	14 RP
16 R	16 RT	16 RP
18 R	18 RT	18 RP
20 R	20 RT	20 RP

WOMEN'S REGULAR	WOMEN'S TALL	WOMEN'S PETITE
6 WR	6 WT	6 WP
8 WR	8 WT	8 WP
10 WR	10 WT	10 WP
12 WR	12 WT	12 WP
14 WR	14 WT	14 WP
16 WR	16 WT	16 WP
18 WR	18 WT	18 WP

JUNIOR REGULAR	JUNIOR TALL	JUNIOR PETITE
10 JR	10 JT	10 JP
12 JR	12 JT	12 JP
14 JR	14 JT	14 JP
16 JR	16 JT	16 JP

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

MASTER SHEET

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF				
	1	10	Front	2
	2	11	Side front	2
	3	20	Side back	2
	4	21	Center back	2
	5	30	Top sleeve	2
	6	31	Under sleeve	2
	7	12	Front facing	2
10190	8	40	Top collar	1
10191	9	41	Under collar	2
10192	10	50	Flap	4
Lining				
	11	10	Front	2
	12	20	Side back	2
	13	21	Center back	2
10196	14	60	Pocket	1
	15	30	Top sleeve	2
	16	31	Under sleeve	2
Fusible				
	17	10	Front	2
	18	11	Side front	2
Fusible				
	19	12	Front facing	2
10202	20	40	Top collar	1
10203	21	41	Under collar	2
10204	26	50	Pocket flaps	2
Markers				
		10	Front buttonhole	1
		11	Front button	1
10207		40	Collar marker	1
		50	Flap marker	1
10209		51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

REGULAR REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RRDJKTS				
10183	1	10	Front	2
10184	2	11	Side front	2
10185	3	20	Side back	2
10186	4	21	Center back	2
10187	5	30	Top sleeve	2
10188	6	31	Under sleeve	2
10189	7	12	Front facing	2
10190	8	40	Top collar	1
10191	9	41	Under collar	2
10192	10	50	Flap	4
LINING > RRDJKTL				
10193	11	10	Front	2
10194	12	20	Side back	2
10195	13	21	Center back	2
10196	14	60	Pocket	1
10197	15	30	Top sleeve	2
10198	16	31	Under sleeve	2
FUSIBLE > RRDJKTF1				
10199	17	10	Front	2
10200	18	11	Side front	2
FUSIBLE > RRDJKTF2				
10201	19	12	Front facing	2
10202	20	40	Top collar	1
10203	21	41	Under collar	2
10204	26	50	Pocket flaps	2
MARKERS > RRDJKTM				
10205		10	Front buttonhole	1
10206		11	Front button	1
10207		40	Collar marker	1
10208		50	Flap marker	1
10209		51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

WOMEN'S REGULAR

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > WRDJKTS			
10183 1	10	Front	2
10210 2	11	Side front	2
10211 3	20	Side back	2
10212 4	21	Center back	2
10213 5	30	Top sleeve	2
10214 6	31	Under sleeve	2
10189 7	12	Front facing	2
10190 8	40	Top collar	1
10191 9	41	Under collar	2
10192 10	50	Flap	4
LINING > WRDJKTL			
10215 11	10	Front	2
10216 12	20	Side back	2
10217 13	21	Center back	2
10196 14	60	Pocket	1
10218 15	30	Top sleeve	2
10219 16	31	Under sleeve	2
FUSIBLE > WRDJKTF1			
10199 17	10	Front	2
10220 18	11	Side front	2
FUSIBLE > WRDJKTF2			
10201 19	12	Front facing	2
10202 20	40	Top collar	1
10203 21	41	Under collar	2
10204 26	50	Pocket flaps	2
MARKERS > use RRDJKTM marker			
10205	10	Front buttonhole	1
10206	11	Front button	1
10207	40	Collar marker	1
10208	50	Flap marker	1
10209	51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

JUNIOR REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JRDJKTS				
10183	1	10	Front	2
10221	2	11	Side front	2
10222	3	20	Side back	2
10223	4	21	Center back	2
10224	5	30	Top sleeve	2
10225	6	31	Under sleeve	2
10189	7	12	Front facing	2
10190	8	40	Top collar	1
10191	9	41	Under collar	2
10192	10	50	Flap	4
LINING > JRDJKTL				
10226	11	10	Front	2
10227	12	20	Side back	2
10228	13	21	Center Back	2
10196	14	60	Pocket	1
10229	15	30	Top sleeve	2
10230	16	31	Under sleeve	2
FUSIBLE > JRDJKTF1				
10199	17	10	Front	2
10231	18	11	Side front	2
FUSIBLE > JRDJKTF2				
10201	19	12	Front facing	2
10202	20	40	Top collar	1
10203	21	41	Under collar	2
10204	26	50	Pocket flaps	2
MARKERS > use RRDJKTM				
10205		10	Front buttonhole	1
10206		11	Front button	1
10207		40	Collar marker	1
10208		50	Flap marker	1
10209		51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

REGULAR TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RTDJKTS				
10232	1	10	Front	2
10233	2	11	Side front	2
10234	3	20	Side back	2
10235	4	21	Center back	2
10236	5	30	Top sleeve	2
10237	6	31	Under sleeve	2
10238	7	12	Front facing	2
10190	8	40	Top collar	1
10191	9	41	Under collar	2
10192	10	50	Flap	4
LINING > RTDJKTL				
10239	11	10	Front	2
10240	12	20	Side back	2
10241	13	21	Center Back	2
10196	14	60	Pocket	1
10242	15	30	Top sleeve	2
10243	16	31	Under sleeve	2
FUSIBLE > RTDJKTF1				
10244	17	10	Front	2
10245	18	11	Side front	2
FUSIBLE > RTDJKTF2				
10246	19	12	Front facing	2
10202	20	40	Top collar	1
10203	21	41	Under collar	2
10204	26	50	Pocket flaps	2
MARKERS > RTDJKTM				
10247		10	Front buttonhole	
1				
10248		11	Front button	1
10207		40	Collar marker	1
10208		50	Flap marker	1
10209		51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

WOMEN'S TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WTDJKTS				
10232	1	10	Front	2
10249	2	11	Side front	2
10250	3	20	Side back	2
10251	4	21	Center back	2
10252	5	30	Top sleeve	2
10253	6	31	Under sleeve	2
10238	7	12	Front facing	2
10190	8	40	Top collar	1
10191	9	41	Under collar	2
10192	10	50	Flap	4
LINING > WTDJKTL				
10254	11	10	Front	2
10255	12	20	Side back	2
10256	13	21	Center back	2
10196	14	60	Pocket	1
10257	15	30	Top sleeve	2
10258	16	31	Under sleeve	2
FUSIBLE > WTDJKTF1				
10244	17	10	Front	2
10259	18	11	Side front	2
FUSIBLE > WTDJKTF2				
10246	19	12	Front facing	2
10202	20	40	Top collar	1
10203	21	41	Under collar	2
10204	26	50	Pocket flaps	2
MARKERS > WTDJKTM				
10247		10	Front buttonhole	1
10248		11	Front button	1
10207		40	Collar marker	1
10208		50	Flap marker	1
10209		51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

JUNIOR TALL

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > JTDJKTS			
10232 1	10	Front	2
10260 2	11	Side front	2
10261 3	20	Side back	2
10262 4	21	Center back	2
10263 5	30	Top sleeve	2
10264 6	31	Under sleeve	2
10238 7	12	Front facing	2
10190 8	40	Top collar	1
10191 9	41	Under collar	2
10192 10	50	Flap	4
LINING > JTDJKTL			
10265 11	10	Front	2
10266 12	20	Side back	2
10267 13	21	Center back	2
10196 14	60	Pocket	1
10268 15	30	Top sleeve	2
10269 16	31	Under sleeve	2
FUSIBLE > JTDJKTF1			
10244 17	10	Front	2
10270 18	11	Side front	2
FUSIBLE > JTDJKTF2			
10246 19	12	Front facing	2
10202 20	40	Top collar	1
10203 21	41	Under collar	2
10204 26	50	Pocket flaps	2
MARKERS > JTDJKTM			
10247	10	Front buttonhole	1
10248	11	Front button	1
10207	40	Collar marker	1
10208	50	Flap marker	1
10209	51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

REGULAR PETITE

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RPDJKTS				
10271	1	10	Front	2
10272	2	11	Side front	2
10273	3	20	Side back	2
10274	4	21	Center back	2
10275	5	30	Top sleeve	2
10276	6	31	Under sleeve	2
10277	7	12	Front facing	2
10190	8	40	Top collar	1
10191	9	41	Under collar	2
10192	10	50	Flap	4
LINING > RPDJKTL				
10278	11	10	Front	2
10279	12	20	Side back	2
10280	13	21	Center back	2
10196	14	60	Pocket	1
10281	15	30	Top sleeve	2
10282	16	31	Under sleeve	2
FUSIBLE > RPDJKTF1				
10283	17	10	Front	2
10284	18	11	Side front	2
FUSIBLE > RPDJKTF2				
10285	19	12	Front facing	2
10202	20	40	Top collar	1
10203	21	41	Under collar	2
10204	26	50	Pocket flaps	2
MARKERS > RPDJKTM				
10286		10	Front buttonhole	1
10287		11	Front button	1
10207		40	Collar marker	1
10208		50	Flap marker	1
10209		51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

WOMEN'S PETITE

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WPDJKTS				
10271	1	10	Front	2
10288	2	11	Side front	2
10289	3	20	Side back	2
10290	4	21	Center back	2
10291	5	30	Top sleeve	2
10292	6	31	Under sleeve	2
10277	7	12	Front facing	2
10190	8	40	Top collar	1
10191	9	41	Under collar	2
10192	10	50	Flap	4
LINING > WPDJKTL				
10293	11	10	Front	2
10294	12	20	Side back	2
10295	13	21	Center back	2
10196	14	60	Pocket	1
10296	15	30	Top sleeve	2
10297	16	31	Under sleeve	2
FUSIBLE > WPDJKTF1				
10283	17	10	Front	2
10298	18	11	Side front	2
FUSIBLE > WPDJKTF2				
10285	19	12	Front facing	2
10202	20	40	Top collar	1
10203	21	41	Under collar	2
10204	26	50	Pocket flap	2
MARKERS > WPDJKTM				
10286		10	Front buttonhole	1
10287		11	Front button	1
10207		40	Collar marker	1
10208		50	Flap marker	1
10209		51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: M-C-29628

NAVY WOMEN'S BLUE DRESS COAT

JUNIOR PETITE

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JPDJKTS				
10271	1	10	Front	2
10299	2	11	Side front	2
10300	3	20	Side back	2
10301	4	21	Center back	2
10302	5	30	Top sleeve	2
10303	6	31	Under sleeve	2
10277	7	12	Front facing	2
10190	8	40	Top collar	1
10191	9	41	Under collar	2
10192	10	50	Flap	4
LINING > JPDJKTL				
10304	11	10	Front	2
10305	12	20	Side back	2
10306	13	21	Center back	2
10196	14	60	Pocket	1
10307	15	30	Top sleeve	2
10308	16	31	Under sleeve	2
FUSIBLE > JPDJKTF1				
10283	17	10	Front	2
10309	18	11	Side front	2
FUSIBLE > JPDJKTF2				
10285	19	12	Front facing	2
10202	20	40	Top collar	1
10203	21	41	Under collar	2
10204	26	50	Pocket flaps	2
MARKERS > JPDJKTM				
10286		10	Front buttonhole	1
10287		11	Front button	1
10207		40	Collar marker	1
10208		50	Flap marker	1
10209		51	Flap shape	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

MASTER SHEET

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF				
	A	10	Center front panel	1
	B	20	Center back panel	1
	C	30	Side front panel	2
	D	40	Side back panel	2
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING				
10008	I	60	Pocket lining	2
	J	10	Center front panel	1
	K	20	Center back panel	1
	L	30	Side front panel	2
	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

REGULAR REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RRGSKTS				
10000 1	A	10	Center front panel	
10001 1	B	20	Center back panel	
10002 2	C	30	Side front panel	
10003 2	D	40	Side back panel	
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING > RRGSKTL				
10008	I	60	Pocket lining	2
10009	J	10	Center front panel	1
10010	K	20	Center back panel	1
10011	L	30	Side front panel	2
10012	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE > RRGSKTF				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES > RRGSKTT				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

WOMEN'S REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WRGSKTS				
10034 1	A	10	Center front panel	
10035 1	B	20	Center back panel	
10036 2	C	30	Side front panel	
10037 2	D	40	Side back panel	
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING > WRGSKTL				
10008	I	60	Pocket lining	2
10038	J	10	Center front panel	1
10039	K	20	Center back panel	1
10040	L	30	Side front panel	2
10041	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE > WRGSKTF				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES > WRGSKTT				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

JUNIOR REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JRGSKTS				
10042	A	10	Center front panel	1
10043	B	20	Center back panel	1
10044	C	30	Side front panel	2
10045	D	40	Side back panel	2
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING > JRGSKTL				
10008	I	60	Pocket lining	2
10046	J	10	Center front panel	1
10047	K	20	Center back panel	1
10048	L	30	Side front panel	2
10049	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE > JRGSKTF				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES > JRGSKTT				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

REGULAR TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RTGSKTS				
10018	A	10	Center front panel	1
10019	B	20	Center back panel	1
10020	C	30	Side front panel	2
10021	D	40	Side back panel	2
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING > RTGSKTL				
10008	I	60	Pocket lining	2
10022	J	10	Center front panel	1
10023	K	20	Center back panel	1
10024	L	30	Side front panel	2
10025	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE > RTGSKTF				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES > RTGSKTT				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

WOMEN'S TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WTGSKTS				
10074	A	10	Center front panel	1
10075	B	20	Center back panel	1
10076	C	30	Side front panel	2
10077	D	40	Side back panel	2
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING > WTGSKTL				
10008	I	60	Pocket lining	2
10078	J	10	Center front panel	1
10079	K	20	Center back panel	1
10080	L	30	Side front panel	2
10081	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE > WTGSKTF				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES > WTGSKTT				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

JUNIOR TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JTGSKTS				
10058	A	10	Center front panel	1
10059	B	20	Center back panel	1
10060	C	30	Side front panel	2
10061	D	40	Side back panel	2
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING > JTGSKTL				
10008	I	60	Pocket lining	2
10062	J	10	Center front panel	1
10063	K	20	Center back panel	1
10064	L	30	Side front panel	2
10065	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE > JTGSKTF				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES > JTGSKTT				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

REGULAR PETITE

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RPGSKTS				
10026	A	10	Center front panel	1
10027	B	20	Center back panel	1
10028	C	30	Side front panel	2
10029	D	40	Side back panel	2
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING > RPGSKTL				
10008	I	60	Pocket lining	2
10030	J	10	Center front panel	1
10031	K	20	Center back panel	1
10032	L	30	Side front panel	2
10033	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE > RPGSKTF				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES > RPGSKTT				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

WOMEN'S PETITE

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WPGSKTS				
10066 1	A	10	Center front panel	
10067 1	B	20	Center back panel	
10068 2	C	30	Side front panel	
10069 2	D	40	Side back panel	
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING > WPGSKTL				
10008	I	60	Pocket lining	2
10070	J	10	Center front panel	1
10071	K	20	Center back panel	1
10072	L	30	Side front panel	2
10073	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE > WPGSKTF				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES > WPGSKTT				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29631

NAVY WOMEN'S BLUE DRESS SKIRT

(SIX-GORE SKIRT)

JUNIOR PETITE

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JPGSKTS				
10050 1	A	10	Center front panel	
10051 1	B	20	Center back panel	
10052 2	C	30	Side front panel	
10053 2	D	40	Side back panel	
10004	E	50	Zipper placket	1
10005	F	60	Pocket welt	2
10006	G	61	Inside pocket	2
10007	H	70	Waistband	1
LINING > JPGSKTL				
10008	I	60	Pocket lining	2
10054	J	10	Center front panel	1
10055	K	20	Center back panel	1
10056	L	30	Side front panel	2
10057	M	40	Side back panel	2
10013	Q	61	Inside pocket lining	2
FUSIBLE > JPGSKTF				
10014	N	60	Fusible pocket welt	2
10015	O	70	Waistband	1
TEMPLATES > JPGSKTT				
10016	P	70	Elastic (waist)	1
10017	R	80	Welt pocket placement	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

MASTER SHEET

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF				
	A	10	Right front pant	1
	B	20	Left front pant	1
	C	30	Back pant	2
10085	E	40	Pocket	1
10086	F	50	3/4 waistband	1
10087	G	60	1/4 waistband	1
10088	H	70	Zipper facing	1
FUSIBLE				
10089	I	50	3/4 waistband	1
10090	J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

REGULAR REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RRDPANTS				
10091	A	10	Right front pant	1
10092	B	20	Left front pant	1
10093	C	30	Back pant	2
10085	E	40	Pocket	1
10086	F	50	3/4 waistband	1
10087	G	60	1/4 waistband	1
10088	H	70	Zipper facing	1
FUSIBLE > RRDPANTF				
10089	I	50	3/4 waistband	1
10090	J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

WOMEN'S REGULAR

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > WRDPANTS			
10094 A	10	Right front pant	1
10095 B	20	Left front pant	1
10096 C	30	Back pant	2
10085 E	40	Pocket	1
10086 F	50	3/4 waistband	1
10087 G	60	1/4 waistband	1
10088 H	70	Zipper facing	1
FUSIBLE > WRDPANTF			
10089 I	50	3/4 waistband	1
10090 J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

JUNIOR REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JRDPANTS				
10082	A	10	Right front pant	1
10083	B	20	Left front pant	1
10084	C	30	Back pant	2
10085	E	40	Pocket	1
10086	F	50	3/4 waistband	1
10087	G	60	1/4 waistband	1
10088	H	70	Zipper facing	1
FUSIBLE > JRDPANTF				
10089	I	50	3/4 waistband	1
10090	J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

REGULAR TALL

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > RTDPANTS			
10109 A	10	Right front pant	1
10110 B	20	Left front pant	1
10111 C	30	Back pant	2
10085 E	40	Pocket	1
10086 F	50	3/4 waistband	1
10087 G	60	1/4 waistband	1
10088 H	70	Zipper facing	1
FUSIBLE > RTDPANTF			
10089 I	50	3/4 waistband	1
10090 J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

WOMEN'S TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WTDPANTS				
10112	A	10	Right front pant	1
10113	B	20	Left front pant	1
10114	C	30	Back pant	2
10085	E	40	Pocket	1
10086	F	50	3/4 waistband	1
10087	G	60	1/4 waistband	1
10088	H	70	Zipper facing	1
FUSIBLE > WTDPANTF				
10089	I	50	3/4 waistband	1
10090	J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

JUNIOR TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JTDPANTS				
10106	A	10	Right front pant	1
10107	B	20	Left front pant	1
10108	C	30	Back pant	2
10085	E	40	Pocket	1
10086	F	50	3/4 waistband	1
10087	G	60	1/4 waistband	1
10088	H	70	Zipper facing	1
FUSIBLE > JTDPANTF				
10089	I	50	3/4 waistband	1
10090	J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

REGULAR PETITE

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > RPDPANTS			
10100 A	10	Right front pant	1
10101 B	20	Left front pant	1
10102 C	30	Back pant	2
10085 E	40	Pocket	1
10086 F	50	3/4 waistband	1
10087 G	60	1/4 waistband	1
10088 H	70	Zipper facing	1
FUSIBLE > RPDPANTF			
10089 I	50	3/4 waistband	1
10090 J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

WOMEN'S PETITE

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > WPDPANTS			
10103 A 1	10	Right front pant	
10104 B 1	20	Left front pant	
10105 C 2	30	Back pant	
10085 E 1	40	Pocket	
10086 F	50	3/4 waistband	1
10087 G	60	1/4 waistband	1
10088 H	70	Zipper facing	1
FUSIBLE > WPDPANTF			
10089 I	50	3/4 waistband	1
10090 J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29630

NAVY WOMEN'S BLUE DRESS SLACKS

(WITH INSIDE POCKET)

JUNIOR PETITE

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > JPDPANTS			
10097 A	10	Right front pant	1
10098 B	20	Left front pant	1
10099 C	30	Back pant	2
10085 E	40	Pocket	1
10086 F	50	3/4 waistband	1
10087 G	60	1/4 waistband	1
10088 H	70	Zipper facing	1
FUSIBLE > JPDPANTF			
10089 I	50	3/4 waistband	1
10090 J	60	1/4 waistband	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

MASTER SHEET

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF				
	A	10	Front skirt	1
	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING				
	F	10	Front skirt	1
	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

REGULAR REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RRWSKTS				
10159	A	10	Front skirt	1
10160	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING > RRWSKTL				
10161	F	10	Front skirt	1
10162	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE > RRWSKTF				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE > RRWSKTT				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

WOMEN'S REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WRWSKTS				
10171	A	10	Front skirt	1
10172	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING > WRWSKTL				
10173	F	10	Front skirt	1
10174	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE > WRWSKTF				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE > WRWSKTT				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

JUNIOR REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JRWSKTS				
10139	A	10	Front skirt	1
10140	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING > JRWSKTL				
10144	F	10	Front skirt	1
10145	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE > JRWSKTF				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE > JRWSKTT				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

REGULAR TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RTWSKTS				
10167	A	10	Front skirt	1
10168	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING > RTWSKTL				
10169	F	10	Front skirt	1
10170	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE > RTWSKTF				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE > RTWSKTT				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

WOMEN'S TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WTWSKTS				
10179	A	10	Front skirt	1
10180	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING > WTWSKTL				
10181	F	10	Front skirt	1
10182	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE > WTWSKTF				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE > WTWSKTT				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

JUNIOR TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JTWSKTS				
10155	A	10	Front skirt	1
10156	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING > JTWSKTL				
10157	F	10	Front skirt	1
10158	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE > JTWSKTF				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE > JTWSKTT				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

REGULAR PETITE

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > RPWSKTS				
10163	A	10	Front skirt	1
10164	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING > RPWSKTL				
10165	F	10	Front skirt	1
10166	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE > RPWSKTF				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE > RPWSKTT				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

WOMEN'S PETITE

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WPWSKTS				
10175	A	10	Front skirt	1
10176	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING > WPWSKTL				
10177	F	10	Front skirt	1
10178	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE > WPWSKTF				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE > WPWSKTT				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-29629

NAVY WOMEN'S BELTED SKIRT

(WORK SKIRT WITH WELT POCKET)

JUNIOR PETITE

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JPWSKTS				
10151	A	10	Front skirt	1
10152	B	20	Back skirt	2
10141	C	30	Waistband	1
10142	D	61	Inside pocket	2
10143	E	60	Welt pocket	2
LINING > JPWSKTL				
10153	F	10	Front skirt	1
10154	G	20	Back skirt	2
10146	H	60	Large pocket	2
10147	I	61	Small pocket	2
FUSIBLE > JPWSKTF				
10148	J	30	Waistband	1
10149	K	60	Welt pocket	2
TEMPLATE > JPWSKTT				
10150		50	Waist elastic	1

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

MASTER SHEET

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF				
	1	10	Front	
2				
	2	20	Back	
2				
10117	3	30	Side front facing	
2				
10118	4	40	Pocket facing	
2				
10119	5	50	Waistband	2
10120	6	60	Zipper facing	3
LINING				
10121	7	40	Pocket	2
FUSIBLE				
10122	8	50	Waistband	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

REGULAR REGULAR

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > RRWPANTS			
10123 1 2	10	Front	
10124 2 2	20	Back	
10117 3 2	30	Side front facing	
10118 4 2	40	Pocket facing	
10119 5	50	Waistband	2
10120 6	60	Zipper facing	3
LINING > RRWPANTL			
10121 7	40	Pocket	2
FUSIBLE > RRWPANTF			
10122 8	50	Waistband	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

WOMEN'S REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WRWPANTS				
10125	1	10	Front	2
10126	2	20	Back	2
10117	3	30	Side front facing	2
10118	4	40	Pocket facing	2
10119	5	50	Waistband	2
10120	6	60	Zipper facing	3
LINING > WRWPANTL				
10121	7	40	Pocket	2
FUSIBLE > WRWPANTF				
10122	8	50	Waistband	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

JUNIOR REGULAR

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > JRWPANTS				
10115	1	10	Front	2
10116	2	20	Back	2
10117	3	30	Side front facing	2
10118	4	40	Pocket facing	2
10119	5	50	Waistband	2
10120	6	60	Zipper facing	3
LINING > JRWPANTL				
10121	7	40	Pocket	2
FUSIBLE > JRWPANTF				
10122	8	50	Waistband	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

REGULAR TALL

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > RTWPANTS			
10135 1 2	10	Front	
10136 2 2	20	Back	
10117 3 2	30	Side front facing	
10118 4 2	40	Pocket facing	
10119 5	50	Waistband	2
10120 6	60	Zipper facing	3
LINING > RTWPANTL			
10121 7	40	Pocket	2
FUSIBLE > RTWPANTF			
10122 8	50	Waistband	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

WOMEN'S TALL

PIECE NAME		CATEGORY	DESCRIPTION	PCS
SELF > WTWPANTS				
10137	1	10	Front	2
10138	2	20	Back	2
10117	3	30	Side front facing	2
10118	4	40	Pocket facing	2
10119	5	50	Waistband	2
10120	6	60	Zipper facing	3
LINING > WTWPANTL				
10121	7	40	Pocket	2
FUSIBLE > WTWPANTF				
10122	8	50	Waistband	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

JUNIOR TALL

PIECE NAME	CATEGORY		DESCRIPTION	PCS
SELF > JTWPANTS				
10133	1	10	Front	2
10134	2	20	Back	2
10117	3	30	Side front facing	2
10118	4	40	Pocket facing	2
10119	5	50	Waistband	2
10120	6	60	Zipper facing	3
LINING > JTWPANTL				
10121	7	40	Pocket	2
FUSIBLE > JTWPANTF				
10122	8	50	Waistband	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

REGULAR PETITE

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > RPWPANTS			
10129 1	10	Front	
2			
10130 2	20	Back	
2			
10117 3	30	Side front facing	
2			
10118 4	40	Pocket facing	
2			
10119 5	50	Waistband	2
10120 6	60	Zipper facing	3
LINING > RPWPANTL			
10121 7	40	Pocket	2
FUSIBLE > RPWPANTF			
10122 8	50	Waistband	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

WOMEN'S PETITE

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > WPWPANTS			
10131 1	10	Front	2
10132 2	20	Back	2
10117 3	30	Side front facing	2
10118 4	40	Pocket facing	2
10119 5	50	Waistband	2
10120 6	60	Zipper facing	3
LINING > WPWPANTL			
10121 7	40	Pocket	2
FUSIBLE > WPWPANTF			
10122 8	50	Waistband	2

PATTERN NUMBER DIRECTORY
(MODEL FILES)

STYLE: MIL-S-24948

NAVY WOMEN'S BELTED SLACKS

(WORK PANTS WITH SIDE POCKETS)

JUNIOR PETITE

PIECE NAME	CATEGORY	DESCRIPTION	PCS
SELF > JPWPANTS			
10127 1 2	10	Front	
10128 2 2	20	Back	
10117 3 2	30	Side front facing	
10118 4 2	40	Pocket facing	
10119 5	50	Waistband	2
10120 6	60	Zipper facing	3
LINING > JPWPANTL			
10121 7	40	Pocket	2
FUSIBLE > JPWPANTF			
10122 8	50	Waistband	2

APPENDIX II: MAGNETIC PATTERN TAPE LOG (PATTERN POSITIONS)

March 7, 1991

Mr. Harry Winer
Navy Clothing & Textile Research Facility
Clothing Development Division
Post Office Box 59
Natick, MA 01760-0001

RE: DEVELOPMENT OF PATTERNS AND CLOTHING PROTOTYPES FOR NAVY WOMEN'S DRESS UNIFORMS; DLA 900-87-D-0016-0005

Dear Mr. Winer:

In accordance with the terms and obligations of the referenced short term research and development project we are, with this letter, submitting to you the required finalized Magnetic Pattern Tape (MPT).

The submitted Magnetic Pattern Tape contains the digitized grades of the 309 individual pattern pieces required for the construction/manufacture of the five (5) Navy Women's Dress Uniform garments in all sizes of the size tariff.

The five Navy Women's Dress Uniform garments are:
Coat, Woman's, Blue, Dress (MIL-C-29124)
Skirt, Woman's, Blue, Dress (MIL-S-29122)
Slack's, Woman's, Blue, Dress (MIL-S-41825)
Skirt, Woman's, Belted (MIL-S-87053)
Slack's, Woman's, Belted (MIL-S-87054)

Accompanying the MPT is a log of the individual pattern pieces and their positions on the tape.

This tape is compatible with the required Gerber Garment Technology, Inc. AM-5 and Accu-Mark systems.

If you have any questions or comments concerning this matter please contact me at 1-212-760-7410.

Sincerely,

Noah Brenner
Project Coordinator
Advanced Apparel Manufacturing
Technology Programs

NB/ir
cc: Donald F. O'Brien
Sarah DiDonato
Henry A. Seesselberg

*(Transcribed from original)

MAGNETIC PATTERN TAPE LOG
(PATTERN POSITIONS)

NAVY WOMEN'S DRESS UNIFORMS

309 INDIVIDUAL GRADED PATTERN
PIECES FOR ALL SIZES OF SIZE TARIFF

F.F T./AAMID CONTRACT DLA900-67-C-0016-0005

(NWDU 10,000 - 10,309)

PIECE FILE INDEX CREATED AT TIME 4:25 PAGE 1

TAPE ENTRY	PC	SPS	DESCRIPTION	PARTS	SEQS	PTS	SIZES	BASE
1	10000	10	S29631 SELF CF PANEL	1	14	36	4- 20	10
2	10001	20	S29631 SELF CB PAN	1	20	47	4- 20	10
3	10002	30	S29631 SELF SF PAN	2	13	33	4- 20	10
4	10003	40	S29631 SELF SB PAN	2	15	37	4- 20	10
5	10004	50	S29631 SELF ZIPPER	3	6	22	4- 20	10
6	10005	60	S29631 SELF POC BELT	3	16	38	4- 20	10
7	10006	61	S29631 SELF INS POC	3	4	26	4- 20	10
8	10007	70	S29631 SELF WAISTBD	2	33	64	4- 20	10
9	10008	60	S29631 POC LINING	3	4	37	4- 20	10
10	10009	10	S29631 LIN CF PAN	1	14	34	4- 20	10
11	10010	20	S29631 LIN CB PAN	1	20	48	4- 20	10
12	10011	30	S29631 LIN SF PAN	2	13	33	4- 20	10
13	10012	40	S29631 LIN S B PAN	2	15	37	4- 20	10
14	10013	61	S29631 LIN INS POC	3	8	31	4- 20	10
15	10014	60	S29631 FUS POC BELT	3	8	14	4- 20	10
16	10015	70	S29631 FUS WAISTBD	2	25	48	4- 20	10
17	10016	70	S29631 WAIST ELASTIC	3	6	18	4- 20	10
18	10017	80	S29631 BELT POC PLAC	3	12	24	4- 20	10
19	10018	10	S29631 SELF CF PAN	1	18	46	4- 20	10
20	10019	20	S29631 SELF CB PAN	1	22	58	4- 20	10
21	10020	30	S29631 SELF SF PAN	2	15	36	4- 20	10
22	10021	40	S29631 SELF SB PAN	2	16	39	4- 20	10
23	10022	10	S29631 LIN CF PAN	1	16	38	4- 20	10
24	10023	20	S29631 LIN CB PAN	1	22	58	4- 20	10
25	10024	30	S29631 LIN SF PAN	2	14	35	4- 20	10
26	10025	40	S29631 LIN SB PAN	2	16	39	4- 20	10
27	10026	10	S29631 SELF CF PAN	1	16	38	4- 20	10
28	10027	20	S29631 SELF CB PAN	1	22	58	4- 20	10
29	10028	30	S29631 SELF SF PAN	2	15	37	4- 20	10
30	10029	40	S29631 SELF SB PAN	2	19	45	4- 20	10
31	10030	10	S29631 LIN CF PAN	1	16	38	4- 20	10
32	10031	20	S29631 LIN CB PAN	1	22	58	4- 20	10
33	10032	30	S29631 LIN SF PAN	2	14	35	4- 20	10
34	10033	40	S29631 LIN SB PAN	2	16	39	4- 20	10
35	10034	10	S29631 SELF CF PAN	1	12	33	4- 20	10
36	10035	20	S29631 SELF CB PAN	1	20	46	4- 20	10
37	10036	30	S29631 SELF SF PAN	2	13	32	4- 20	10
38	10037	40	S29631 SELF SB PAN	2	15	37	4- 20	10
39	10038	10	S29631 LIN CF PAN	1	14	38	4- 20	10
40	10039	20	S29631 LIN CB PAN	1	22	58	4- 20	10
41	10040	30	S29631 LIN SF PAN	2	14	35	4- 20	10
42	10041	40	S29631 LIN SB PAN	2	16	39	4- 20	10
43	10042	10	S29631 SELF CF PAN	1	14	36	4- 20	10
44	10043	20	S29631 SELF CB PAN	1	22	52	4- 20	10
45	10044	30	S29631 SELF SF PAN	2	13	33	4- 20	10
46	10045	40	S29631 SELF SB PAN	2	16	39	4- 20	10
47	10046	10	S29631 LIN CF PAN	1	14	36	4- 20	10
48	10047	20	S29631 LIN CB PAN	1	20	48	4- 20	10
49	10048	30	S29631 LIN SF PAN	2	14	35	4- 20	10
50	10049	40	S29631 LINSB PAN	2	15	36	4- 20	10

MAGNETIC PATTERN TAPE LOG
(PATTERN POSITIONS)

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TAPE ENTRY	PC	SPN	DESCRIPTION	PARTS	SEGS	PTS	SIZES	BASE
51	10050	10	S29631 SELF CF PAN	1	14	34	4- 20	10
52	10051	20	S29631 SELF CB PAN	1	20	50	4- 20	10
53	10052	30	S29631 SELF SF PAN	2	13	33	4- 20	10
54	10053	40	S29631 SELF SB PAN	2	16	39	4- 20	10
55	10054	10	S29631 LIN CF PAN	1	14	34	4- 20	10
56	10055	20	S29631 LIN CB PAN	1	22	50	4- 20	10
57	10056	30	S29631 LIN SF PAN	2	13	33	4- 20	10
58	10057	40	S29631 LIN SB PAN	2	16	39	4- 20	10
59	10058	10	S29631 SELF CF PAN	1	14	36	4- 20	10
60	10059	20	S29631 SELF CB PAN	1	20	48	4- 20	10
61	10060	30	S29631 SELF SF PAN	2	13	33	4- 20	10
62	10061	40	S29631 SELF SB PAN	2	15	37	4- 20	10
63	10062	10	S29631 LIN CF PAN	1	14	34	4- 20	10
64	10063	20	S29631 LIN CB PAN	1	20	48	4- 20	10
65	10064	30	S29631 LIN SF PAN	2	13	33	4- 20	10
66	10065	40	S29631 LIN SB PAN	2	15	37	4- 20	10
67	10066	10	S29631 SELF CF PAN	1	16	40	4- 20	10
68	10067	20	S29631 SELF CB PAN	1	20	46	4- 20	10
69	10068	30	S29631 SELF SF PAN	2	13	33	4- 20	10
70	10069	40	S29631 SELF SB PAN	2	15	37	4- 20	10
71	10070	10	S29632 LIN CF PAN	1	16	38	4- 20	10
72	10071	20	S29631 LIN CB PAN	1	20	46	4- 20	10
73	10072	30	S29631 LIN SF PAN	2	14	35	4- 20	10
74	10073	40	S29631 LIN SB PAN	2	15	37	4- 20	10
75	10074	10	S29631 SELF CF PAN	1	14	34	4- 20	10
76	10075	20	S29631 SELF CB PAN	1	20	46	4- 20	10
77	10076	30	S29631 SELF SF PAN	2	13	33	4- 20	10
78	10077	40	S29631 SELF SB PAN	2	15	37	4- 20	10
79	10078	10	S29631 LIN CF PAN	1	16	38	4- 20	10
80	10079	20	S29631 LIN CB PAN	1	22	50	4- 20	10
81	10080	30	S29631 LIN SF PAN	2	14	35	4- 20	10
82	10081	40	S29631 LIN SB PAN	2	16	39	4- 20	10
83	10082	10	S29630 SELF R FRT	4	23	67	4- 20	10
84	10083	20	S29630 SELF L FRT	4	22	61	4- 20	10
85	10084	30	S29630 SELF BACK	4	22	66	4- 20	10
86	10085	40	S29630 SELF POC	3	16	38	4- 20	10
87	10086	50	S29630 S 3/4 WAISTBD	4	18	34	4- 20	10
88	10087	60	S29630 S 1/4 WAIST	3	15	28	4- 20	10
89	10088	70	S29630 SELF ZIPPER	2	9	25	4- 20	10
90	10089	50	S29630 F 3/4 WAISTBD	3	6	18	4- 20	10
91	10090	60	S29630 F 1/4 WAISTBD	2	5	8	4- 20	10
92	10091	10	S29630 SELF R FRT	4	23	67	4- 20	10
93	10092	20	S29630 SELF L FRT	4	23	64	4- 20	10
94	10093	30	S29630 SELF BACK	4	22	66	4- 20	10
95	10094	10	S29630 SELF RT FRT	3	21	65	4- 20	10
96	10095	20	S29630 SELF LF FRT	3	21	62	4- 20	10
97	10096	30	S29630 SELF BACK	4	22	67	4- 20	10
98	10097	10	S29630 SELF R FRT	4	23	66	4- 20	10
99	10098	20	S29630 SELF L FRT	4	23	64	4- 20	10
100	10099	30	S29630 SELF BACK	4	22	64	4- 20	10

MAGNETIC PATTERN TAPE LOG
(PATTERN POSITIONS)

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TAPE ENTRY	PC	SPS	DESCRIPTION	PARTS	SEGS	PTS	SIZES	BASE
101	10100	10	S29630 SELF R FRT	4	23	67	4- 20	10
102	10101	20	S29630 SELF L FRT	4	23	64	4- 20	10
103	10102	30	S29630 SELF BACK	4	22	65	4- 20	10
104	10103	10	S29630 SELF R FRT	4	23	68	4- 20	10
105	10104	20	S29630 SELF L FRT	4	22	62	4- 20	10
106	10105	30	S29630 SELF BACK	4	22	66	4- 20	10
107	10106	10	S29630 SELF RT FRT	3	21	63	4- 20	10
108	10107	20	S29630 SELF LF FRT	3	21	63	4- 20	10
109	10108	30	S29630 SELF BACK	4	22	65	4- 20	10
110	10109	10	S29630 SELF RT FRT	3	21	63	4- 20	10
111	10110	20	S29630 SELF LF FRT	3	21	68	4- 20	10
112	10111	30	S29630 SELF BACK	4	22	69	4- 20	10
113	10112	10	S29630 SELF RT FRT	3	21	63	4- 20	10
114	10113	20	S29630 SELF LF FRT	3	21	68	4- 20	10
115	10114	30	S29630 SELF BACK	4	22	69	4- 20	10
116	10115	10	S24948 FT PANT	3	21	53	4- 20	10
117	10116	20	S24948 BK PANT	3	21	59	4- 20	10
118	10117	30	S24948 SD F FAC	3	9	26	4- 20	10
119	10118	40	S24948 S POC FAC	3	10	28	4- 20	10
120	10119	50	S24948 S WAIST	3	17	32	4- 20	10
121	10120	60	S24948 ZIP FAC	3	8	22	4- 20	10
122	10121	40	S24948 LIN POC	2	12	47	4- 20	10
123	10122	50	S24948 F WAIST	3	6	11	4- 20	10
124	10123	10	S24948 FT PANT	3	21	55	4- 20	10
125	10124	20	S24948 BK PANT	3	20	59	4- 20	10
126	10125	10	S24948 FT PANT	3	21	54	4- 20	10
127	10126	20	S24948 BK PANT	3	21	61	4- 20	10
128	10127	10	S24948 FT PANT	3	20	52	4- 20	10
129	10128	20	S24948 BK PANT	3	20	55	4- 20	10
130	10129	10	S24948 FT PANT	3	21	53	4- 20	10
131	10130	20	S24948 BK PANT	3	20	56	4- 20	10
132	10131	10	S24948 FT PANT	3	21	54	4- 20	10
133	10132	20	S24948 BK PANT	3	20	56	4- 20	10
134	10133	10	S24948 FT PANT	3	21	54	4- 20	10
135	10134	20	S24948 BK PANT	3	20	58	4- 20	10
136	10135	10	S24948 FT PANT	3	21	56	4- 20	10
137	10136	20	S24948 BK PANT	3	20	58	4- 20	10
138	10137	10	S24948 FT PANT	3	21	56	4- 20	10
139	10138	20	S24948 BK PANT	3	20	59	4- 20	10
140	10139	10	S29629 SELF FT SKT	7	30	62	4- 20	10
141	10140	20	S29629 SELF BK	3	17	42	4- 20	10
142	10141	30	S29629 SELF WAIST	3	26	58	4- 20	10
143	10142	61	S29629 SELF INS POC	3	4	26	4- 20	10
144	10143	60	S29629 SELF POC WELT	3	16	38	4- 20	10
145	10144	10	S29629 LIN FT SKT	5	22	52	4- 20	10
146	10145	20	S29629 LIN BK	3	17	39	4- 20	10
147	10146	60	S29629 POC LINING	3	4	37	4- 20	10
148	10147	61	S29629 LIN INS POC	3	8	31	4- 20	10
149	10148	30	S29629 FUS WAIST	3	6	10	4- 20	10
150	10149	60	S29627 FUS POC WELT	3	8	14	4- 20	10

MAGNETIC PATTERN TAPE LOG
(PATTERN POSITIONS)

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TAPE ENTRY	PC SPN	DESCRIPTION	PARTS	SEGS	PTS	SIZES	BASE
151	10150 50	S29629 WAIST ELASTIC	3	6	10	4- 20	10
152	10151 10	S29629 SELF FRT	7	30	64	4- 20	10
153	10152 20	S29629 SELF BK	3	19	42	4- 20	10
154	10153 10	S29629 LIN FRT	5	22	52	4- 20	10
155	10154 20	S29629 LIN BK	3	17	40	4- 20	10
156	10155 10	S29629 SELF FRT	7	30	62	4- 20	10
157	10156 20	S29629 SELF BK	3	19	43	4- 20	10
158	10157 10	S29629 LIN FRT	5	22	52	4- 20	10
159	10158 20	S29629 LIN BK	3	17	39	4- 20	10
160	10159 10	S29629 SELF FRT	7	30	62	4- 20	10
161	10160 20	S29629 SELF BK	3	19	42	4- 20	10
162	10161 10	S29629 LIN FT	5	22	52	4- 20	10
163	10162 20	S29629 LIN BK	3	17	39	4- 20	10
164	10163 10	S29629 SELF FRT	7	30	62	4- 20	10
165	10164 20	S29629 SELF BK	3	19	42	4- 20	10
166	10165 10	S29629 LIN FRT	5	22	52	4- 20	10
167	10166 20	S29629 LIN BK	3	15	35	4- 20	10
168	10167 10	S29629 SELF FRT	7	30	62	4- 20	10
169	10168 20	S29629 SELF BK	3	19	42	4- 20	10
170	10169 10	S29629 LIN FRT	5	22	52	4- 20	10
171	10170 20	S29629 LIN BK	3	17	39	4- 20	10
172	10171 10	S29629 SELF FRT	7	30	62	4- 20	10
173	10172 20	S29629 SELF BK	3	19	42	4- 20	10
174	10173 10	S29629 LIN FRT	5	22	52	4- 20	10
175	10174 20	S29629 LIN BK	3	17	40	4- 20	10
176	10175 10	S29629 SELF FRT	7	30	62	4- 20	10
177	10176 20	S29629 SELF BK	3	19	42	4- 20	10
178	10177 10	S29629 LIN FRT	5	22	52	4- 20	10
179	10178 20	S29629 LIN BK	3	17	39	4- 20	10
180	10179 10	S29629 SELF FRT	7	30	62	4- 20	10
181	10180 20	S29629 SELF BK	3	19	42	4- 20	10
182	10181 10	S29629 LIN FRT	5	22	52	4- 20	10
183	10182 20	S29629 LIN BK	3	17	38	4- 20	10
184	10183 10	C29628 S FRONT	2	19	62	4- 20	10
185	10184 11	C29628 S SD FRT	2	20	63	4- 20	10
186	10185 20	C29628 S SD BACK	2	19	55	4- 20	10
187	10186 21	C29628 S CTR BK	2	22	59	4- 20	10
188	10187 30	C29628 S TP SLV	2	12	40	4- 20	10
189	10188 31	C29628 S UN SLV	2	11	36	4- 20	10
190	10189 12	C29628 S FT FAC	2	13	49	4- 20	10
191	10190 40	C29628 S TP COL	2	15	53	4- 20	10
192	10191 41	C29628 S UN COL	4	14	39	4- 20	10
193	10192 50	SELF FLAP	3	9	19	4- 20	10
194	10193 10	C29628 LIN FRT	2	18	52	4- 20	10
195	10194 20	C29628 LIN SD BK	2	17	51	4- 20	10
196	10195 21	C29628 L CTR BK	2	19	53	4- 20	10
197	10196 60	C29628 L POC	1	10	37	4- 20	10
198	10197 30	C29628 L TP SLV	2	10	56	4- 20	10
199	10198 31	C29628 L UN SLV	2	9	33	4- 20	10
200	10199 10	C29628 FUS FRT	2	19	62	4- 20	10

MAGNETIC PATTERN TAPE LOG
(PATTERN POSITIONS)

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TAPE ENTRY	PC	SPN	DESCRIPTION	PARTS	SEGS	PTS	SIZES	BASE
201	10200	11	C29628 F SD FRT	2	20	63	4- 20	10
202	10201	12	C29628 F FT FAC	2	13	49	4- 20	10
203	10202	40	C29628 F TP COL	2	15	53	4- 20	10
204	10203	41	C29628 F UN COL	4	14	43	4- 20	10
205	10204	50	FUS FLAP	3	8	19	4- 20	10
206	10205	10	C29628 FT BUTTONHOL	6	20	42	4- 20	10
207	10206	11	C29628 FT BUTTON	7	18	37	4- 20	10
208	10207	40	C29628 COL MARK	2	17	54	4- 20	10
209	10208	50	C29628 FLAP MARKER	4	19	53	4- 20	10
210	10209	51	C29628 FLAP	4	13	25	4- 20	10
211	10210	11	C29628 S SD FRT	2	19	59	4- 20	10
212	10211	20	C29628 S SD BK	2	19	52	4- 20	10
213	10212	21	C29628 S CTR BK	2	22	54	4- 20	10
214	10213	30	C29628 S TP SLV	2	12	50	4- 20	10
215	10214	31	C29628 S UN SLV	2	12	37	4- 20	10
216	10215	10	C29628 L SD FRT	2	17	38	4- 20	10
217	10216	20	C29628 L SD BK	2	17	48	4- 20	10
218	10217	21	C29628 L CTR BK	2	20	49	4- 20	10
219	10218	30	C29628 L TP SLV	2	10	47	4- 20	10
220	10219	31	C29628 L UN SLV	2	9	32	4- 20	10
221	10220	11	C29628 F SD FRT	2	18	59	4- 20	10
222	10221	11	C29628 S SD FRT	2	20	59	4- 20	10
223	10222	20	C29628 S SD BK	2	19	53	4- 20	10
224	10223	21	C29628 S CTR BK	2	23	55	4- 20	10
225	10224	30	C29628 S TP SLV	2	12	49	4- 20	10
226	10225	31	C29628 S UN SLV	2	11	35	4- 20	10
227	10226	10	C29628 L SD FRT	2	18	51	4- 20	10
228	10227	20	C29628 L SD BK	2	17	50	4- 20	10
229	10228	21	C29628 L CTR BK	2	20	50	4- 20	10
230	10229	11	C29628 L TP SLV	2	10	44	4- 20	10
231	10230	31	C29628 L UN SLV	2	9	32	4- 20	10
232	10231	11	C29628 F SD FRT	2	20	59	4- 20	10
233	10232	10	C29628 SELF FRT	2	19	57	4- 20	10
234	10233	11	C29628 S SD FRT	2	21	63	4- 20	10
235	10234	20	C29628 S SD BK	2	20	55	4- 20	10
236	10235	21	C29628 S CTR BK	2	22	58	4- 20	10
237	10236	30	C29628 S TP SLV	2	12	49	4- 20	10
238	10237	31	C29628 S UN SLV	2	11	35	4- 20	10
239	10238	12	C29628 S FT FAC	2	13	48	4- 20	10
240	10239	10	C29628 L SD FRT	2	17	52	4- 20	10
241	10240	20	C29628 L SD BK	2	17	49	4- 20	10
242	10241	21	C29628 L CTR BK	2	20	49	4- 20	10
243	10242	30	C29628 L TP SLV	2	10	47	4- 20	10
244	10243	31	C29628 L UN SLV	2	9	30	4- 20	10
245	10244	10	C29628 FUS FRT	2	18	57	4- 20	10
246	10245	11	C29628 F SD FRT	2	20	61	4- 20	10
247	10246	12	C29628 F FT FAC	3	14	52	4- 20	10
248	10247	27	C29628 FT BUTTONHOL	6	20	42	4- 20	10
249	10248	11	C29628 FT BUTTON	6	18	37	4- 20	10
250	10249	11	C29628 S SD FRT	2	21	66	4- 20	10

MAGNETIC PATTERN TAPE LOG
(PATTERN POSITIONS)

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TAPE ENTRY	PC	SPC	DESCRIPTION	PARTS	SEGS	PTS	SIZES	BASE
251	10250	20	C29628 S SD 3K	2	20	58	4- 20	10
252	10251	21	C29628 S CTR 3K	2	23	57	4- 20	10
253	10252	30	C29628 S TP SLV	2	12	50	4- 20	10
254	10253	31	C29628 S UN SLV	2	11	34	4- 20	10
255	10254	10	C29628 L SD FRT	2	10	50	4- 20	10
256	10255	20	C29628 L SD 3K	2	16	47	4- 20	10
257	10256	21	C29628 L CTR 3K	2	20	49	4- 20	10
258	10257	30	C29628 L TP SLV	2	10	49	4- 20	10
259	10258	31	C29628 L UN SLV	2	10	31	4- 20	10
260	10259	11	C29628 F SD FRT	2	20	50	4- 20	10
261	10260	11	C29628 S SD FRT	2	20	62	4- 20	10
262	10261	20	C29628 S SD 3K	2	20	53	4- 20	10
263	10262	21	C29628 S CTR 3K	2	23	56	4- 20	10
264	10263	30	C29628 S TP SLV	2	12	49	4- 20	10
265	10264	31	C29628 S UN SLV	2	11	34	4- 20	10
266	10265	10	C29628 L SD FRT	2	10	50	4- 20	10
267	10266	20	C29628 L SD 3K	2	10	49	4- 20	10
268	10267	57	C29628 L CTR 3K	2	17	50	10- 16	10
269	10268	30	C29628 L TP SLV	2	10	49	4- 20	10
270	10269	31	C29628 L UN SLV	2	9	30	4- 20	10
271	10270	11	C29628 F SD FRT	2	20	62	4- 20	10
272	10271	10	C29628 S FRT	2	19	61	4- 20	10
273	10272	11	C29628 S SD FRT	2	21	62	4- 20	10
274	10273	20	C29628 S SD 3K	2	20	54	4- 20	10
275	10274	21	C29628 S CTR 3K	2	24	57	4- 20	10
276	10275	30	C29628 S TP SLV	2	12	50	4- 20	10
277	10276	31	C29628 S UN SLV	2	11	35	4- 20	10
278	10277	12	C29628 S FT FAC	2	13	47	4- 20	10
279	10278	10	C29628 L SD FRT	2	10	51	4- 20	10
280	10279	20	C29628 L SD 3K	2	17	50	4- 20	10
281	10280	21	C29628 L CTR 3K	2	22	52	4- 20	10
282	10281	30	C29628 L TP SLV	2	10	47	4- 20	10
283	10282	31	C29628 L UN SLV	2	9	31	4- 20	10
284	10283	10	C29628 F FRT	2	19	61	4- 20	10
285	10284	11	C29628 F SD FRT	2	21	62	4- 20	10
286	10285	12	C29628 F FT FAC	3	14	51	4- 20	10
287	10286	10	C29628 FT BUTTONHOL	6	20	47	4- 20	10
288	10287	11	C29628 FT BUTTON	7	17	41	4- 20	10
289	10288	11	C29628 S SD FRT	2	20	62	4- 20	10
290	10289	20	C29628 S SD 3K	2	18	53	4- 20	10
291	10290	21	C29628 S CTR 3K	2	22	56	4- 20	10
292	10291	30	C29628 S TP SLV	2	12	49	4- 20	10
293	10292	31	C29628 S UN SLV	2	12	36	4- 20	10
294	10293	10	C29628 L SD FRT	2	10	51	4- 20	10
295	10294	20	C29628 L SD 3K	2	16	50	4- 20	10
296	10295	21	C29628 L CTR 3K	2	20	49	4- 20	10
297	10296	30	C29628 L TP SLV	2	10	46	4- 20	10
298	10297	31	C29628 L UN SLV	2	9	31	4- 20	10
299	10298	11	C29628 F SD FRT	2	19	61	4- 20	10
300	10299	11	C29628 S SD FRT	2	19	61	4- 20	10

MAGNETIC PATTERN TAPE LOG
(PATTERN POSITIONS)

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TAPE ENTRY	PC SPN	DESCRIPTION	PARTS	SEGS	PTS	SIZES	BASE
301	10300 20	C29628 S SD BK	2	18	53	4- 20	10
302	10301 21	C29628 S CTR BK	2	22	53	4- 20	10
303	10302 30	C29628 S TP SLV	2	12	58	4- 20	10
304	10303 31	C29628 S UR SLV	2	11	35	4- 20	10
305	10304 10	C29628 L SD FRT	2	18	52	4- 20	10
306	10305 20	C29628 L SD BK	2	16	47	4- 20	10
307	10306 21	C29628 L CTR BK	2	19	45	4- 20	10
308	10307 30	C29628 L TP SLV	2	10	46	4- 20	10
309	10308 31	C29628 L UR SLV	2	9	31	4- 20	10
310	10309 11	C29628 F SD FRT	2	18	59	4- 20	10

APPENDIX III: RESEARCH SCHEDULE TASK REVIEWS - A CHRONOLOGY

RESEARCH SCHEDULE TASK REVIEWS - A CHRONOLOGY

SEPTEMBER 1989. The first month of the project was devoted to the planning function and to the purchasing of materials necessary to begin work. A Program Schedule (Gantt chart) was developed outlining in detail the timing for the inception and completion of the tasks involved in the project. Purchase orders were placed immediately for three full-length model forms, to be built according to the new NCTRF anthropometric data, and then for fabrics and findings that were needed for initial prototype development.

Construction of the model forms was particularly problematic. The purchase order for the forms was placed with Wolf Model Forms, a highly reputable manufacturer of forms and a recognized expert in this field. As they molded the forms according to the new measurements with which we supplied them, they were alarmed by the width of the thighs and, on several occasions, questioned the accuracy of our data. There were a number of delays while members of our research team reexamined the data and reassured the manufacturer of the forms that the measurements submitted were, indeed, correct. Eventually the forms were completed in conformance with the new data.

At a meeting of all principal investigators on September 18, 1989, the fit and construction of the samples that had been supplied by NCTRF were analyzed. The samples consisted of the Navy Blue Dress Coat, the Navy Blue Dress Skirt, the Navy Blue Dress Slacks, the White Belted Skirt, and the White Belted Slacks. It was agreed that various pattern and construction modifications would enhance fit, would simplify alterations, and would better conform to modern manufacturing methods.

The following pattern changes and construction modifications were proposed.

Navy Blue Dress Coat:

- Move princess seam approximately 3/8 inch toward the side seam;
- Eliminate dart at side front;
- Replace shoulder pad with heavier, more shapely pad;
- Correct sleeve cap and armhole;
- Correct side and shoulder seam;
- Provide 1 inch seam allowance on side seam;
- Provide 5/8 inch seam allowance on all other seams; and,
- Utilize fusible interfacing in all areas except collar.

Navy Blue Dress Skirt:

- Insert elastic section at center back of waistband;
- Serge seams, eliminate pinking; and,
- Construct pocket entirely of self-fabric.

Navy Blue Dress Slacks:

- Eliminate second dart at front and back.

White Belted Skirt:

- Eliminate facing inside pocket, make pocket more shallow;
- Place zipper at side seam;
- Square off belt at closure;
- Insert elastic section at center back of waistband;
- Eliminate second dart at front; and,
- Eliminate simulated flat felled seams.

White Belted Slacks:
- Eliminate pocketing, use self fabric for pockets; and,
- Eliminate facing inside pockets.

OCTOBER 1989. On October 18, a Women's Sizing Program Meeting took place at NCTRF. This meeting was attended by the NCTRF staff and representatives from F.I.T./AAMTD.

Body Measurement Tables that had been furnished to F.I.T./AAMTD as part of the Statement of Work and the project contract had been revised by NCTRF and were submitted at this time for comments. Although the actual measurements did not change, the number of sizes to be developed was reduced and the nomenclature was changed. "Minus Hips" sizes were now to be referred to as "Junior" sizes, and "Plus Hips" sizes were now to be "Women's" sizes. The nomenclature for lengths - "Petite", "Regular", and "Tall" -remained unchanged.

At this meeting, it was also announced that NCTRF was moving the completion date of the project from August 6, 1990 to May 30, 1990, effectively eliminating two months from the total time originally projected for completion.

The above, combined with a delay of almost two months in the delivery of the model forms that had been ordered to meet the anthropometric specifications of the project, now required the expenditure of extraordinary efforts to meet the newly established deadlines.

The Project Schedule originally prepared for the project was modified, and two additional faculty members of the F.I.T. Fashion Design Department, Prof. Wallace Sloves and Prof. Rose Rosa, were asked to assist in the pattern development phase of the project in order to speed up the completion of this work.

By the end of the month, all materials necessary for the development of the prototypes, except for the Government Furnished Materials, had been delivered.

On October 24, the model forms were delivered. They appeared rather heavy in the lower hip and thigh area, but upon further reflection we concluded that they looked like well developed athletic women. At this point, the pattern development work was begun and proceeded according to the revised schedule.

NOVEMBER 1989. The entire month of November was devoted to the development of the first patterns for the five Dress Uniform garments. The first patterns were draped in sizes 10 Junior Petite, 10 Junior Regular, and 10 Junior Tall. Modifications to improve fit and construction methods were incorporated. Muslin toiles (models) were constructed to test design and fit on the new model forms as well as on live models. One dress coat prototype was tailored in fabric to test the interfacing materials and to evaluate the fit of the finished garment. Students, whose body measurements corresponded as closely as possible to the anthropometric data supplied by NCTRF, were selected to serve as models.

On November 29th, a joint NCTRF/AAMTD meeting was scheduled at F.I.T./AAMTD to evaluate the initial muslin toiles for style modifications and fit. The attendees were: Ms. Sirvart Mellian and Mr. Harry Winer representing NCTRF, and Professors Jaffe, Konde, and Caffarelli of F.I.T./AAMTD. The finished dress coat was analyzed. This resulted in differences of opinion regarding its hand or feel. It was, therefore, decided that other fusible interfacings were to be tested before a final selection was made. Also, as a result of the meeting, some minor adjustments were made in the patterns for the dress coat, the belted slacks and the belted skirt.

Chart I, FABRIC DESIGNATIONS FOR INITIAL PROTOTYPES, was developed at the November 29 meeting to designate the fabric in which each of the initial prototypes was to be developed.

The target date for the completion of all the initial prototypes in Size 10 was set for January 2, 1990.

CHART I

FABRIC DESIGNATIONS FOR INITIAL PROTOTYPES					
SIZES	DRESS COAT	DRESS SKIRT	DRESS SLACKS	BELTED SKIRT	BELTED SLACKS
Jr. P10	blue	blue	blue	wh. poly	wh. gab
Jr. R10	wh. poly	wh. poly	wh. poly	wh. poly	wh. gab
Jr. T10	blue	blue	blue	wh. poly	wh. gab
Miss P10	wh. poly	wh. poly	wh. poly	wh. poly	wh. gab
Miss R10	blue	blue	blue	wh. poly	wh. gab
Miss T10	blue	blue	blue	wh. poly	wh. gab
Wom. P10	blue	blue	blue	wh. poly	wh. gab
Wom. R10	blue	blue	blue	wh. poly	wh. gab
Wom. T10	wh. poly	wh.poly	wh. poly	wh. poly	wh. gab

blue = blue polyester/wool tropical

wh. poly = white texturized polyester

wh. gab = white polyester/cotton twill

DECEMBER 1989. In the month of December, muslin patterns were developed in the following sizes: Regular Petite, Regular Regular, and Regular Tall; Women's Petite, Women's Regular, and Women's Tall. In order to test the draped muslin patterns, muslin toiles were sewn and then fitted on student models. Minor adjustments in the patterns were made prior to hard paper pattern development.

Hard paper patterns were manually developed from the corrected muslin patterns for all Size 10 prototypes: a total of 45 garments, proportioned to height and hip measurements, and consisting of nine dress coats, nine dress skirts, nine dress slacks, nine belted skirts and nine belted slacks.

As soon as the paper patterns were completed, garment parts of the initial prototypes were cut out individually. All cutting was done at the F.I.T./AAMTD facility. The sewing, however, was done by contractors under project team supervision. Unfortunately, the originally selected contractors were no longer available. Frank Soltz and Sons, Inc. had declared Chapter 11 bankruptcy and had closed its plants; Catania Clothing Co. and Patmore Coat, Inc., because of an overload of work from other sources, could not accept sample orders from us at the time that we needed them. We, therefore, had the coats manufactured by Jackie Evans, Inc. and we had the Junior size skirts and slacks produced by Rosario Sportswear, Inc. Unfortunately, Rosario Sportswear stopped all work and closed its plant for the Christmas/New Year holidays and was not able to produce the Regular and Women's size slacks and skirts for December 31st completion. This caused us to turn to Pat and Rose Dress, Inc., a special sample contractor, who accommodated our needs and completed the necessary work on schedule.

In order to get ready for the pattern grading in Phase II of the project, which was scheduled to begin in January, Cassandra Williams began preliminary work required for the generation of the Grade Rule Tables.

JANUARY 1990. On January 10th, with Ms. Sirvart Mellian of the U.S. Navy in attendance, the initial prototypes were fit tested on student models at F.I.T./AAMTD. It was found that during the construction process some minor pattern-to-garment discrepancies arose which could not be corrected before the garments were completed. These, and other problems identified during the fit test, required the modification of the hard paper patterns and the construction of new prototypes.

The following corrections were made:

- All skirt patterns were adjusted to have less ease at the hipline;
- The slacks patterns were adjusted to reduce the amount of front rise;
- Dress coat patterns were adjusted at the side panel and the arm-hole. The collar length was slightly reduced and some of the sleeve-cap ease was eliminated to facilitate production.

New prototypes, incorporating the corrections noted above, were cut and sewn in the F.I.T./Advanced Apparel Manufacturing Technology Demonstration facility. This enabled the project team's pattern designers and production people to work more closely together analyzing production requirements and to work out any production problems that they identified. New samples were completed in January for the Navy Blue Dress Skirt and Navy Blue Dress Slacks.

The Grade Rule Tables were finalized and grading was scheduled to proceed as soon as the first prototypes were approved.

FEBRUARY 1990. A set of corrected samples in Size 10 Junior Regular was completed for the fit test scheduled for February 20th. The set consisted of the Navy Blue Dress Skirt, Navy Blue Dress Slacks, White Belted Skirt, White Belted Slacks, and a White Dress Coat. This last garment, similar in all respects to the Navy Blue Dress Coat except for fabric, was constructed at the request of Ms. Sirvart Mellian. Construction problems of all the garments were analyzed in preparation for the documentation that the project team was going to present.

At the fit test on February 20th, with Ms. Sirvart Mellian (NCTRF) present, it was determined that the skirts and the white belted slacks were ready for duplication in Regular and Women's sizes, but the waistline of the dress slacks was still a little high in front and needed adjustment. Also, the dress coat needed further adjustment at the underarm.

Since the white belted slacks with the side pockets were flattering and relatively simple to produce, the F.I.T./AAMTD project team agreed to Ms. Mellian's suggestion to develop a white skirt with the same styling, even though this was not a part of the project contract. Subsequently, Professor Konde draped the skirt in muslin and Professor Lupia developed the initial paper pattern. The skirt was draped with the same side pocket as the slacks. The waistline dart, however, was changed to a small pleat. This skirt was also cut for Size 10 Regular height in Junior, Regular, and Women's hip widths.

After the fit test, the skirt and slacks patterns were digitized into the Gerber Accu-Mark 300 System. Markers were generated and the samples were cut on the Gerber cutting system at the F.I.T./AAMTD facility.

In order to develop a truly well fitting and well tailored dress coat, it was decided to have the dress coat prototypes developed in a professional sample room that specializes in women's tailored garments. Harve Benard, Ltd., a firm that specializes in this type of apparel was chosen for the exercise. Mr. Bernard Holzman, owner and designer, agreed to produce the prototypes for the Size 10 Regular height Junior, Regular, and Women's dress coats and to make any corrections to the patterns that might be necessary.

MARCH 1990. During the first two weeks of the month of March, the modified sample garments of the Women's Dress Uniforms were completed. The sample room personnel at Harve Benard, Ltd. completed 3 dress coats in size 10, Regular height: one each in Junior, Regular, and Women's cuts, according to our instructions. The coats retained the traditional collar, lapel, and breast pocket flaps, as well as the placement of the front buttons. The fit of the coats was modified according to the agreement which had been reached at the October 18, 1989 meeting at NCTRF. Darts were eliminated to provide a silhouette more consistent with current style and one that would be easier to fit and alter, and also one that would be less complicated to produce.

The new white, belted skirt with side pockets, as well as the altered slacks, were completed at the F.I.T./Advanced Apparel Manufacturing Technology Development facility.
On March 14, with Ms. Sirvart Mellian present, the samples were shown on student models. Ms. Mellian subsequently took the samples to NCTRF in Natick for further evaluation.

After the samples were evaluated at NCTRF, the project team was asked to develop slacks that were more form-fitting. New patterns for the slacks were developed and samples were again cut and constructed. The slacks were made up in both navy polyester/wool tropical cloth and white textured polyester fabric. These new samples were submitted to NCTRF for evaluation.

We were also asked to develop and submit another side pocket skirt in which the pleat at the waistline was replaced with a dart, another request that was outside the terms of our contract. However, we honored this request and submitted the samples to Ms. Mellian for her further interest and information.

Since more than fifteen (15) days had elapsed since its submission to NCTRF and we had not been advised to the contrary, we assumed that there were no corrections necessary on the six-gore Navy Blue Dress Skirt. We, therefore, proceeded to grade this garment.

APRIL 1990. During the first half of the month of April, work on the project was at a virtual stand-still as the project team waited for NCTRF to comment on the latest prototypes that had been submitted to them for evaluation late in March. During that period, however, we continued to digitize the patterns for the Navy Dress Skirt and the Navy Dress Slacks because we had not been advised of any problems with these items at previous F.I.T. fittings or within the fifteen (15) day period for comments following their submissions and we felt the pressure of our commitment to meet the May 30, 1990 completion date.

On Thursday, April 12th, Ms. Mellian telephoned with the results of the NCTRF evaluation. The project team was instructed as follows.

1. The Navy Blue Dress Coat, incorporating the shoulder fit of the new prototype, was to be fitted close to the body with darts as in the original sample. The pocket flaps were to be replaced with a simulated welt pocket.

2. The design of the White Skirt (textured polyester) with side pockets was to be modified so that the pocket opening would begin 1-3/4" from the side seam at the waistline and would end 5" down from the waistline at the side seam. The pocket itself was to be small and rounded. Elastic at the waistline was to be eliminated.

3. The Navy Blue Dress Skirt was to be redeveloped without any pocket and with no elastic at the waistband.

4. The White Belted Slacks (polyester/cotton) were to have the width of the extension at the center front placket reduced.

5. The Navy Dress Slacks were approved for grading.

On April 17th, we faxed a memorandum to Ms. Mellian asking for written verification of the above instructions. We pointed out that the new design modifications requested in items 1, 2 & 3 negated the agreement regarding our design proposals that were reached at the F.I.T./NCTRF meeting of October 18, 1989.

We also pointed out that the side pocket skirt was not included in the original contract and that we had only informally agreed to proceed with that item when we thought we had more time for project completion.

Our fax message further explained that the new design modifications required us to repeat work that should have been completed in December 1989, and that the requests for design modifications were in conflict with the first two requirements of the original Statement of Work that said, "The only changes should be that the patterns be manipulated and graded to improve fit, simplify alteration and sized according to the government furnished anthropometric and demographic data of 1988."

We further pointed out that due to the limitations of our funding and the proximity of the required project completion date we could not proceed with any further design changes. We asked for rectification of the situation and requested that Ms. Mellian contact us for further discussion.

When we telephoned NCTRF on April 18th to ascertain receipt of the faxed memo, Ms. Mellian was not available, and we had no response to the memo until Noah Brenner, F.I.T./AAMTD Research Coordinator, followed up on April 23rd with a letter to Commander W.E. Johnson at NCTRF.

It was not until April 30th that a telephone call to F.I.T./-AAMTD from Mr. Harry Winer of NCTRF resolved the situation by authorizing us to proceed as follows.

- Navy Blue Dress Slacks: Approved for grading as submitted.
- Navy Blue Dress Coat: Last submitted sample approved for grading as submitted.
- Navy Blue Six-Gore Dress Skirt: Approved for grading as submitted.
- White Belted Skirt: Approved for grading as submitted.
- White Belted Slacks: Reduce the width of the extension at the front placket and proceed with grading.
- White Skirt with Side Pockets: All further work is to be discontinued.

We were also instructed to revise our Program Schedule chart accordingly and to have it reflect a new and reasonable timetable for completion of the project.

MAY 1990. In the month of May, work proceeded on the reproduction of the prototypes. Our first task was to grade the Navy Blue Dress Slacks into the sizes specified by NCTRF, a total of 60 sizes. Since the Gerber AM-5 Systems at F.I.T. are used by students at all times, the original work for this project was done on a Gerber Accu-Mark 300 system. When all work was completed, the data on the floppy disk was converted onto a Gerber AM-5 streamer cassette tape as required by the project.

After grading the Navy Blue Dress Slacks, markers were generated and the prototypes were cut in the F.I.T./Advanced Apparel Manufacturing Technology Demonstration facility. Work commenced on the analysis and documentation of production methods. The cut prototypes were then bundled and sent to Fifth Avenue Classics for the sewing and finishing operations.

Work was also begun on the grading and marker making of the Navy Blue Dress Skirt.

Original patterns were also developed for the Tall and Petite sizes of the Navy Blue Dress Coat. Samples were cut by hand and sent to Fifth Avenue Classics for fabrication.

JUNE 1990. In the month of June, work proceeded on the development of the prototypes. The Navy Blue Dress Slacks were completed by the contractor. An inspection system was developed, and the pants were measured and inspected at the F.I.T./AAMTD facility. Size designations and measurements were recorded on hang tags attached to each garment.

The markers for the Navy Blue Six-Gore Dress Skirt prototypes were developed and cutter tapes were generated. These skirts were cut, sent to the contractor, and completed by the end of the month.

The White Belted Slacks and the White Belted Skirt patterns were digitized, graded, and the markers were developed. The prototypes were cut and were sent to the contractor for the sewing operations.

During the fabrication of the first samples of the Tall and Petite size 10 prototypes of the Navy Blue Dress Coat the contractor discovered some discrepancies in the patterns. Subsequently, corrections to facilitate production were made, and the patterns were prepared for grading.

As work progressed, production methods were analyzed and documented.

JULY 1990. Several program milestones were concluded during July. All patterns were digitized and plotted. Magnetic tape cassettes were generated. All necessary markers were developed and the cutting of prototypes was completed.

The fabrication of prototypes proceeded, but with several unanticipated delays. The failure of air conditioning equipment in the F.I.T./AAMTD laboratory and the subsequent heat in the facility required the shut-down of the computerized cutting equipment on several occasions so that the cutting of the Women's Navy Blue Dress Coat could not be completed before the last day of the month.

The sewing of the White Belted Slacks was completed in a timely fashion. The contractor, however, encountered some difficulty in handling the 100% polyester fabric of the White Belted Skirt. Nevertheless, the skirts were also completed and delivered by the end of the month.

As prototypes were completed they were measured, labeled, and inspected at the F.I.T./AAMTD laboratory prior to final pressing.

As work progressed, production methods continued to be analyzed and documented.

AUGUST 1990. All program milestones that were scheduled for completion in August were successfully concluded.

The Navy Blue Dress Coat samples were fabricated and delivered to the F.I.T/AAMTD laboratory where production methods were analyzed and documented. This concluded the documentation process, and a complete Description of Construction Methods and Sequence was prepared by Josef Korngruen.

After all finished prototypes were inspected and occasional minor flaws corrected, the prototypes were packed and shipped to the Navy Training Center in Orlando, Florida.

During the period of August 20 to 24, F.I.T. Professors Hilde Jaffe and Lita Konde participated in a fit test of the prototypes on Navy women. The fit test was scheduled at the Navy Training Center in Orlando for two weeks, from August 20 to

31. Unavoidably, the beginning of the Fall semester at F.I.T. on August 27 prevented the participation of F.I.T. personnel after August 24. Nevertheless, we were able to observe the reaction of 89 Navy women subjects as they tried on and evaluated the various garments.

Each subject tried on 10 garments, 5 garments developed by F.I.T./AAMTD and 5 garments developed independently by NCTRF. The F.I.T./AAMTD garments were developed, as per our contract, according to the new sizing specifications developed by the Navy and with NCTRF-approved styling modifications that provided improved fit for more body types, easier and less expensive alterations where necessary, and contemporary production methods. The NCTRF garments were developed according to the new sizing specifications also, but with no style modifications.

Garments were evaluated by the Navy women subjects, by Ms. Sirvart Mellian of the NCTRF, and by Prof. Hilde Jaffe representing F.I.T./AAMTD.

Throughout the first week of testing, visitors observed the try-on and evaluation procedure. Observers present on Thursday, August 23 were: Carmen A. Dippolito, MCLB; Martha L. McCagg, U.S. Army; Debra J. Klensch, HSD/YAGC; Peg Altenay HSD/YAGC; Kathleen Robinette, AAMRL/HEG; Patrick Cooke, Coast Guard; Helen Kerlin, DLA; and Harry Winer, NCTRF.

Preliminary results of the evaluations (based on the first week of the fit test) indicated that the new sizing system was successful in virtually eliminating the need for alterations, and both the Navy women subjects and the professionals present indicated significant preference for the F.I.T. versions of the Navy Blue Dress Slacks, the Navy Blue Dress Skirt, the White Belted (polyester/cotton) Slacks, and the White Belted Skirt. Although the majority of the evaluators indicated a preference for the F.I.T./AAMTD Navy Blue Dress Coat, there was a considerable number of women who preferred the close fit of the traditional Dress Coat developed by NCTRF.

SEPTEMBER 1990. The research team could not immediately complete its final tasks since these were dependent on decisions to be made by NCTRF regarding the outcome of the fit test conducted in August. Since these decisions were not made available during the month to the F.I.T./AAMTD project team, no project work was able to be performed in September.

OCTOBER 1990. The research team could still not complete its final tasks since decisions by NCTRF arising from the August fit tests at the Navy Training Center in Orlando, Florida were still not available.

NOVEMBER 1990. Work continued to be suspended throughout most of November pending the NCTRF decisions to the August fit tests in Orlando. During the last week of the month, however, we were notified by NCTRF that there were no further garment modifications required and that we were to proceed with the completion of all remaining project tasks.

DECEMBER 1990. In addition to the notification from NCTRF that no further modifications of patterns were necessary the project team was also given permission to submit all patterns to NCTRF on magnetic tape compatible with the Gerber AM-5 and Accu-Mark 300 system. This was in lieu of the originally required preparation of hard paper patterns. We thereupon entered the final phase of the project.

All garment patterns were again checked prior to conversion of the magnetic tape to the AM-5 system and minor pattern discrepancies that had surfaced during the sewing process were corrected. The actual conversion of the tape was accomplished by Gerber Garment Technology, Inc., South Windsor, CT. The converted data was then entered on the AM-5 system at F.I.T./AAMTD and the final checking and plotting of the patterns was begun. Unfortunately, the work had to be interrupted at this point because Ms. Williams, the project pattern grader, required surgery and was hospitalized.

JANUARY 1991. The uncompleted final plotting and checking of the converted pattern tapes was completed by Ms. Laura Nugent, a member of the Apparel Production Management Department at F.I.T. Thus, the project team was able to complete the final tasks of project work.