

INCH-POUND

DDD-F-416F
31 March 2005
SUPERSEDING
DDD-F-416E
November 27, 1981

FEDERAL SPECIFICATION

FLAG, NATIONAL, UNITED STATES OF AMERICA AND FLAG, UNION JACK

The General Services Administration has authorized the use of this federal specification by all Federal Agencies.

1. SCOPE AND CLASSIFICATION.

1.1 Scope. This specification covers requirements for United States of America National Flag and Union Jack.

1.2 Classification. The US National Flag and Union Jack shall be of the following materials, designs, heading types and classes, and sizes, as specified:

1.2.1 Materials.

- Cotton bunting
- Nylon bunting, lightweight
- Nylon bunting, heavyweight
- Nylon and wool bunting
- Rayon banner cloth

1.2.2 Star design application.

- Appliqué (applicable to indoor and outdoor flags)
- Swiss hand loom embroidery (for indoor flags only)
- Schiffli embroidered (applicable to indoor and outdoor flags)

1.2.3 Headings. The headings of the US National Flag and Union Jack shall be of the following types and classes, as specified:

- Type I - Duck
 - Class 1 - with distance line, ring, and snaphook
 - Class 2 - with grommets

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: The Institute of Heraldry, ATTN: Stanley Haas (Stanley.Haas@tiah.belvoir.army.mil), Technical and Production Division, 9325 Gunston Road, Building 1466, Room S-112, Fort Belvoir, VA 22060-5579. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

Class 3 - with distance line and thimbles
Class 4 - with grommets and leather tabs

Type II - Tube or tunnel type
Type III - Heading, automobile flag type
Class 2 - with leather tabs (automobile flag)

1.2.4 Sizes. Sizes shall be as specified on Figure 1.

2. APPLICABLE DOCUMENTS.

2.1. Government publications. The following documents, of the issues in effect on the date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Specifications:

V-T-295 - THREAD, NYLON

Commercial Item Descriptions:

A-A-50196 - THREAD, SILK.
A-A-52094 - THREAD, COTTON
A-A-59591 - CLOTH, BUNTING, COTTON, MERCERIZED
A-A-59709 - CLOTH, BUNTING, NYLON; AND NYLON AND WOOL

Military Specifications:

MIL-C-606 -CLOTH, RAYON, BANNER
MIL-DTL-32072 - THREAD, POLYESTER
MIL-DTL-32075 - LABEL: FOR CLOTHING, EQUIPAGE, AND TENTAGE
(GENERAL USE)
MIL-F-2310 -FRINGE, ORNAMENTAL, RAYON.
MIL-C-3636 -CORDS AND TASSELS.
MIL-H-15021-HOOKS, SNAP-BOLT, SWIVEL-EYE AND RINGS.

Military Standards:

MIL-STD-129 - MILITARY MARKING FOR SHIPMENT AND STORAGE

(Copies of the above referenced government publications are available online at <http://assist.daps.dla.mil/quicksearch/> from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094, telephone 215-697-2179.)

The Institute of Heraldry Drawings:

5-1-17 - FLAG, NATIONAL, USA, 50 STAR UNION JACK (Figure 1)
5-1-45A - FLAG HEADINGS, TYPE I, CLASS 1 (Figure 2)
5-1-45B - FLAG HEADINGS, TYPE I, CLASS 2 AND CLASS 2A (Figure 3)

- 5-1-45G - FLAG HEADINGS, TYPE I, CLASS 3 (Figure 4)
- 5-1-45D - FLAG HEADINGS, TYPE I, CLASS 4 (Figure 5)
- 5-1-45E - FLAG HEADINGS, TYPE II (Figure 6)
- 5-1-45F - FLAG HEADINGS, TYPE III, CLASS 1 AND CLASS 2 (Figure 7).

(The figures included in this specification are intended for general illustration only and are not to be used for manufacture. Full size copies of the current revisions of any of the above drawings required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

Laws and Regulations:

RULES AND REGULATIONS UNDER THE TEXTILE FIBER PRODUCTS
IDENTIFICATION ACT

(This publication is available from the Federal Trade Commission online at www.ftc.gov/os/statutes/textile/rr-textl.htm.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on the date of invitation for bids or request for proposal shall apply.

Aerospace Industries Association of America, Inc.:

NASM-16491 – GROMMET, METALLIC

(This document is available from Thomson Scientific, 3501 Market Street, Philadelphia, PA 19104, telephone 800-336-4474. The document can be ordered online at http://www.techstreet.com/cqi-bin/detail?product_id=1033349.)

American Association Of Textile Chemists and Colorists (AATCC):

AATCC-111 – WEATHER RESISTANCE OF TEXTILES: EXPOSURE TO
DAYLIGHT AND WEATHER

(This test method is available from AATCC, P.O. Box 12215, Research Triangle Park, NC 27709, www.aatcc.org.)

ASTM International:

ASTM-D276 – STANDARD TEST METHODS FOR IDENTIFICATION OF FIBERS IN
TEXTILES

ASTM-D5034 - BREAKING FORCE AND ELONGATION OF TEXTILE FABRICS
(GRAB TEST)

ASTM-D6193 - STANDARD PRACTICE FOR STITCHES AND SEAMS

(ASTM publications can be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 or www.astm.org.)

American Society for Quality (ASQ)

ANSI/ASQC Z1.4 - SAMPLING PROCEDURES AND TABLES FOR INSPECTION
BY ATTRIBUTES

(ASQ publications can be obtained from the American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203-2914 or www.asq.org.)

The Color Association of The United States

THE STANDARD COLOR REFERENCE OF AMERICA, 10TH EDITION and
supplement, THE U.S. ARMY COLOR CARD

(These color references can be obtained from The Color Association of the United States, 315 West 39th Street, Studio 507, New York, NY 10018, telephone: 212 947-7774, www.colorassociation.com.)

Cordage Institute

CI-1500 - TEST METHODS FOR FIBER ROPE
CI-1303 - NYLON (POLYAMIDE) FIBER ROPE, 3-Strand and 8-Strand
Constructions
CI-1304 - POLYESTER (PET) FIBER ROPE, 3-Strand and 8-Strand Constructions
CI-1321 - NYLON (POLYAMIDE) FIBER CORD/ROPE, Solid Braid Constructions
CI-1322 - POLYESTER (PET) RIBER CORD/ROPE, Solid Braid Constructions

(These standards are available from the Cordage Institute, 994 Old Eagle School Road, Ste. 1019, Wayne, Pennsylvania 29087-1866, telephone 610-971-4854, www.ropecord.com.)

International Plant Protection Convention (IPPC)

ISPM #15 - INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES;
GUIDELINES FOR REGULATING WOOD PACKAGING MATERIAL IN
INTERNATIONAL TRADE

(This document is available from the IPPC's International Phytosanitary Portal (IPP) at <http://www.ippc.int>. At "Standards," select "Adopted ISPMs"; then select "en" for the English version of ISPM #15. Additional information regarding import and export of wood packaging material is at <http://www.aphis.usda.gov/lpa/issues/wpm/wpm.html>.)

Ira Green, Inc.

DOD STANDARD SHADES FOR HERALDIC YARNS FOR EMBROIDERY AND
RIBBONS, 1993 EDITION

(This yarn guide can be obtained from Ira Green, Inc., 177 Georgia Avenue, Providence, RI 02905.)

National Motor Freight Traffic Association (NMFTA), Agent

NATIONAL MOTOR FREIGHT CLASSIFICATION

(This publication can be obtained from the NMFTA, 2200 Mill Road, Alexandria, VA 22314, telephone 703-838-1810, www.nmfta.org.)

Uniform Classification Committee, Agent

UNIFORM FREIGHT CLASSIFICATION

(This publication can be obtained from the Uniform Freight Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago IL 60606.)

3. REQUIREMENTS

3.1 First article. When required (see 6.2), before production is commenced, a sample or samples of the finished item shall be submitted to the contracting officer or his authorized representative for inspection as specified in 4.2. The approval of the first article authorizes the commencement of production but does not relieve the contractor of responsibility for compliance with all applicable provisions of this specification. The first article shall be manufactured by the contractor in the same facilities to be used for the production items.

3.2 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

3.3 Materials. Materials shall be as specified herein.

3.3.1 Basic flag materials.

3.3.1.1 Cotton bunting. Cotton bunting shall conform to A-A-59591.

3.3.1.2 Lightweight nylon bunting. The lightweight nylon bunting shall conform to Type I, Class A of A-A-59709.

3.3.1.3 Heavyweight nylon bunting. The heavyweight nylon bunting shall be a regular tenacity 200 denier single yarn in both the warp and the filling and shall have the following other characteristics:

Weight: 32 oz. per square yard

Yarns per square inch: 60 in the warp; 56 in the filling

Breaking strength: 175 pounds in the warp; 152 pounds in the filling

Colorfastness: as specified by A-A-59709.

3.3.1.4 Nylon and wool bunting. The nylon and wool bunting shall conform to Type II of A-A-59709.

3.3.1.5 Rayon banner cloth. The rayon banner cloth shall conform to MIL-C-606.

3.3.2 Cotton duck. The cotton duck used for the heading shall be white or greige, have 2 ply yarn in both the warp and the filling, and shall have weight and breaking strength as follows:

Weight: not less than 8.25 oz. per square yard

Breaking strength when tested using the grab method test specified in ASTM-D5034 (see 4.3.2): not less than 105 pounds in the warp; not less than 100 pounds in the filling

3.3.3 Cotton sheeting.

3.3.3.1 Lining. The sheeting used for lining the tube or tunnel of the heading shall be a plain weave cotton greige fabric having the following characteristics:

Weight: 4.8 oz. per square yard

Yarns per square inch: 40 in the warp; 44 in the filling

Breaking strength: 35 pounds in the warp; 65 pounds in the filling

3.3.3.2 Stars for cotton and nylon-wool bunting. The sheeting for these appliquéd stars shall be as specified in 3.3.3.1.

3.3.3.3 Stars for lightweight and heavyweight nylon bunting. The sheeting for these appliquéd stars shall be as specified in 3.3.3.1 except that the back shall be coated with a non-fray coating.

3.3.4 Sewing thread.

3.3.4.1 Polyester sewing thread. Thread used for sewing all flags shall be polyester conforming to Type I or II, Class 1 of MIL-DTL-32072. Unless otherwise specified, the thread shall conform to Tex size 45. Stars shall be appliquéd using Tex size 30. Distance line shall be stitched using Tex size 70, and the cotton duck heading shall be stitched using Tex size 90.

3.3.4.2 Nylon sewing thread. As an alternate, nylon sewing thread conforming to Type I or Type II, Class A of V-T-295 may be used on nylon fabric. Unless otherwise stated, the Letter size shall be AA. Stars shall be appliquéd using Letter size A. Distance line shall be sewn with Letter size E, and heading shall be sewn with Letter size F.

3.3.5 Embroidery thread

3.3.5.1 Silk embroidery thread. The Swiss handloom machine embroidery thread shall be a silk embroidery thread conforming to Embroidery Type, Tex 70 of A-A-50196, with a breaking strength of 4.7 pounds minimum.

3.3.5.2 Schiffli or machine embroidery thread or yarn.

3.3.5.2.1 Rayon. The rayon embroidery thread or yarn shall be a semi-dull, continuous filament, regenerated cellulose type rayon, 2 ply Schiffli type. The single yarn shall be 150 denier rayon as specified on the applicable cartoon. For other than Schiffli embroidery, the single yarn shall be 120 or 122 denier rayon.

3.3.5.2.2 Cotton. The cotton embroidery thread or yarn shall be a 2 ply, bleached, Schiffli type. The single yarn shall be 30/1 or 40/1 cotton as specified on the applicable cartoon.

3.3.6 Rope for distance lines. Rope for all distance lines shall be rot and mildew resistant, abrasion resistant, white nylon or polyester as shown in Table I. Rope for distance lines for

Type I, Class 3 headings shall be not less than 5/16 inch in diameter. Testing for rope shall be as specified in 4.3.2.

TABLE I. **Rope for distance lines.** 1/

TYPE ROPE	DIAMETER	BREAKING STRENGTH
twisted nylon	1/4 inch	not less than 1486 lbs
	5/16 inch	not less than 2295 lbs
	3/8 inch	not less than 3240 lbs
twisted polyester	1/4 inch	not less than 1315 lbs
	5/16 inch	not less than 2050 lbs
	3/8 inch	not less than 2900 lbs
solid braided nylon	1/4 inch	not less than 1440 lbs
	5/16 inch	not less than 2160 lbs
	3/8 inch	not less than 3060 lbs
solid braided polyester	1/4 inch	not less than 1295 lbs
	5/16 inch	not less than 1945 lbs
	3/8 inch	not less than 2755 lbs

1/ Information for this table was obtained from CI-1303, CI-1304, CI-1321, and CI-1322 (see 2.2).

3.3.7. Grommets. Grommets shall be brass, commercial size 2, 3, or 4, rolled rim grommets with spur washers in accordance with NASM-16491, Type III, Class 1.

3.3.8 Snaphooks and rings. The snaphooks and rings shall conform to MIL-H-15021. The snaphooks shall be Type I unless otherwise specified.

3.3.9 Thimbles (for Type I, Class 3 heading only). The thimbles for the distance lines shall be galvanized steel and shall be of the type used for 5/16 inch diameter wire rope, semicircular at the closed ends and tapering at the free ends.

3.3.10 Leather. The leather tabs shall be undyed natural colored full grain cattlehide. The leather shall be soft and pliable. The leather shall be clean and free of stain or other foreign matter. The flesh side of the leather shall be smooth and free of loose flesh. Leather shall have a minimum thickness of 1/8 inch.

3.3.11 Artificial leather. When directed by the contract or purchase order (see 6.2 and 6.3) or recommended by the manufacturer, artificial leather conforming to the requirements of 3.3.10 as applicable may be substituted for leather. Artificial leather shall also have a minimum thickness of 1/8 inch.

3.3.12 Fringe. When specified (see 6.2), the fringe shall conform to Class 2 of MIL-F-2310, except for automobile flags which shall conform to Class 1 of MIL-F-2310. Rayon/acetate may be substituted for cuprammonium rayon. When used, the rayon/acetate yarn for the heading and bullion shall be a 575 ± 15 denier acetate, continuous multi-filament bright viscose rayon. All other requirements of MIL-F-2310 shall apply, except the heading of the finished fringe shall have a minimum of 8 ends for Class 1 or 12 ends for Class 2 in the float stripe and a minimum of 9 ends for Class 1 or 14 ends for Class 2 in each border. The color of the fringe shall be

Spanish (golden) yellow No. 80068 (reference the Standard Color Reference of America, 10th Edition; 2.2) or No. 65001 (U.S. Army Color Card).

3.3.13 Cords and tassels. When specified (see 6.2), the cords and tassels shall conform to Class 1 of MIL-C-3636.

3.3.14 Marking ink. The marking ink shall be indelible black laundry marking ink that is colorfast to laundering and dry cleaning.

3.4 Design. The design of the US National Flag and Union Jack shall be as shown on TIOH Drawing 5-1-17. The flag shall consist of 13 horizontal stripes, 7 red and 6 white which shall alternate beginning and ending with a red stripe, and the Union Jack. On the face side, each stripe shall overlap the stripe beneath it, forming a shingle effect. The canton or Union Jack shall contain 50 stars arranged in 9 rows; 5 rows of 6 stars and 4 rows of 5 stars which shall alternate beginning and ending with a row of 6 stars. Each star shall have 1 point upward. Stars shall be symmetrically arranged in horizontal, vertical, and diagonal rows. The warp of the base cloth fabric shall run in the direction of the stripes. A tolerance of ± 5 percent shall be allowed for all dimensions exceeding 4 inches, except that the maximum and minimum measurements of the same dimensions on a single flag may not differ by more than 2 percent of each other and both measurements be within 5 percent tolerance on the minus side or plus side (dimensions involved are "A," "B," "C," and "D"). A tolerance of $\pm 1/4$ inch shall be allowed for dimensions from 2 to 4 inches and a tolerance of $\pm 1/8$ inch shall be allowed for dimensions 2 inches or less. Tolerance for the "E" dimensions on the Schiffli embroidered star fields shall be $3/4$ inch. Piecing of the canton or Union Jack is prohibited except for flags with a blue field hoist dimension exceeding 60 inches, in which case only 3 pieces will be allowed and no piece shall measure less than 32 inches in the hoist dimension.

3.4.1. Star design application. The stars shall be applied by only one of the following methods per procurement, as specified (see 6.2). When stars are embroidered, the color of the embroidery yarn shall conform to White, Cable No. 67101 from DOD Standard Shades for Heraldic Yarns for Embroidery and Ribbons (see 2.2.)

Appliqué.

Swiss handloom embroidered (indoor flags only).

Schiffli embroidered (applicable to indoor and outdoor flags).

The stars shall be identically oriented on each side with respect to the heading or staff side of the flag. The face of the flag is the front side when the heading is to the viewer's left.

3.4.1.1 Appliqué stars. When stars are appliquéd, the materials for the stars shall be as listed in Table II. The stars may be sized to aid in sewing provided the sizing agent does not have a deleterious effect on appearance or serviceability. The finished stars shall be neatly trimmed.

TABLE II. **Material for appliquéd stars.**

FLAG MATERIAL	MATERIAL FOR STARS (WITH REFERENCE PARAGRAPH)
Cotton bunting	Cotton sheeting - 3.3.3.2
Nylon, lightweight or heavyweight	Nylon cloth - 3.3.1.2 or 3.3.1.3
Nylon and wool bunting	Cotton sheeting - 3.3.3.2
Rayon banner cloth	Rayon cloth - 3.3.1.5

3.4.1.2 Machine embroidered stars (Swiss handloom). When Swiss handloom embroidered stars are specified, they shall be a split stitch design. Single thread or double thread Swiss handloom embroidery may be used. The stitches shall completely cover the base cloth, and the execution of the embroidery shall be clear and distinct.

3.4.1.3 Machine embroidered stars (Schiffli embroidered). When Schiffli embroidered stars are specified, the design and stitch count shall be governed by the applicable cartoon which is part of this specification. The required cartoon should be obtained from the procuring activity or as directed by the contracting officer (see 6.2). The stars in the Schiffli star fields for all outdoor flags shall be made from cotton yarn specified in 3.3.5.2.2. The stars in the Schiffli star fields for all indoor flags shall be made from rayon yarn specified in 3.3.5.2.1. The stitching of the stars shall cover the base cloth, and the execution of the embroidery shall be clear and distinct. The fields shall be embroidered in a horizontal direction. For all Schiffli embroidered star fields, the distance between stars in the same horizontal row shall be governed by the applicable Schiffli machine span in lieu of the twice "H" dimensions. The stars in each row shall be centered with each succeeding row. The total accumulated distance between stars using the applicable Schiffli span plus the "G" dimensions shall be used in lieu of dimension "D." The Schiffli embroidered spans to be used are as follows:

STANDARD SIZE			SPECIAL SIZE		
<u>NO. OF LINE</u>	<u>SPAN</u>	<u>INCHES</u>	<u>NO. OF LINE</u>	<u>SPAN</u>	<u>INCHES</u>
3	28/4	7-7/16	3	28/4	6-3/8
4	20/4	5-5/16	4	20/4	5-5/16
5	16/4	4-1/4	5	12/4*	3-3/16
6	12/4*	3-3/16	6	8/4	2-1/8

See TIOH Drawing 5-1-17 for flag size and dimensions.

* "H" dimension tolerance for these sizes shall be $\pm 1/4$ inch.

3.4.1.3.1 Position of Schiffli embroidered star field. The completed star field shall be placed within the flag in the position indicated in TIOH Drawing 5-1-17 with the face side or with the cover stitches of the stars showing.

3.5 Color. The colors, from the Standard Color Reference of America, 10th Edition (see 2.2), of the US National Flag are as follows:

Old Glory Red
White
Old Glory Blue

3.5.1. Colorfastness. Colorfastness of red or blue base cloth shall be in accordance with the requirements of the specification for the applicable material. Rating on an objective basis will be performed only when a standard sample of reference of the exact material is not provided.

3.6 Stitches, seams, and stitching. The stitch and seam types specified herein shall conform to ASTM-D6193 (see 2.2). The number of stitches shall be as required herein.

3.6.1 Stitch type. The stars, rope, and joining of rope to heading shall be stitched with stitch type 304. Seams and stripes may be sewn with stitch type 301 or 401 provided the white looper thread in the 401 stitch is always on the white portion of the stripes. In all other flags the seams and stripes shall be stitched with stitch type 301.

3.6.2 Stitches per inch.

3.6.2.1 Seams, hems, and reinforcement patches. The seams, hems, and reinforcement patches shall be sewn with not less than 10 stitches per inch.

3.6.2.2 Stars. Stars appliquéd on cotton flags shall be sewn with a minimum of 24 stitches per inch with a 1/8 inch throw. Stars appliquéd on nylon or nylon-wool flags shall be sewn with 28 to 32 stitches per inch with a 1/16 to 1/8 inch throw. Stars appliquéd on rayon banner flags shall be sewn with a minimum of 58 stitches per inch with a 1/16 inch throw.

3.6.3 Construction and stitching of seams, hem, reinforcement patches, and fringe. The ends of all stitching, when not caught in other seams or stitching, shall be backstitched for a distance of not less than 1 inch or locked with a 9/16 inch 28-stitch bartack.

3.6.3.1 Joining stripes and horizontal seam between stripes and union. The seam type used for joining the stripes and horizontal seam between the stripes and union shall be LSc-2, except the turned under edges shall extend the full depth of the seam (full double turn under). The stitching gauge of all seams shall be not less than 3/16 inch and not more than 3/8 inch in both the vertical and horizontal directions.

3.6.3.2 Stitching of hems at edges. All raw edges shall be hemmed. Except as otherwise indicated herein for fringed flags (see 3.6.3.4), hemming shall be accomplished on the reverse side of the flag. A selvage edge may be used in lieu of hemming at the top or bottom edges of the flag, except that flags manufactured from all nylon shall be hemmed on all edges. Unless otherwise specified, the top and bottom edges shall be hemmed with stitching type EFb-2 with not less than a 3/8 inch wide hem having a full turn-under. The fly edge of all flags, except those constructed of rayon banner cloth, shall be hemmed with stitching type EFb-3 or EFb-4 with not less than a 3/4 inch wide hem having a full turn-under. The stitching gauge shall not be less than 3/16 inch. Flags constructed of rayon banner cloth shall be hemmed with stitching type EFb-2, with not less than a 1/2 inch wide hem having a turn-under of less than 3/8 inch. The stitching gauge shall not be less than 1/4 inch.

3.6.3.3 Reinforcement patches. Reinforcement patches are not required on flags with a Type II or Type III heading or on other flags and pennants having a hoist of 60 inches or less. All other

flags shall have reinforcement patches of the same material and color as that of the section to be reinforced, sewn to each corner, at the hoist end, and extending within the heading the same distance as the flag. The reinforcement patches shall be located on the reverse side of the flag. The exposed portion of the reinforcement patch shall be square with sides equal in length to the width of the stripe. When the size of the patch would interfere with the placement of the stars, the size of the patch shall be as near the required size as possible. The reinforcement patches for the Union Jack shall be of sufficient size to accommodate a complete star.

3.6.3.4 Stitching of fringe. When fringe is specified for flags, a continuous length of the fringe conforming to 3.3.12 shall be stitched to the face side of the flag at the top, fly, and bottom edges and completely around each end of the heading. The fringe shall be neatly turned at the corners of the flag, and the raw ends of the fringe shall be turned under and caught in the flag heading stitching. Selvages may be used unless the edges are not straight or are too tight. When cut edges are used, the top, bottom, and fly edges shall be hemmed with an Efb-1 type stitching. The stitching used to attach the fringe to the flag may be incorporated in the formation of the hem. As an alternate, the edge of the flag may be hemmed with an Efa-1 stitching and turned over prior to the attachment of the fringe. The width of the hem shall be not less than 3/32 inch or more than 3/16 inch. The hems under the fringe shall be on the face side of the flag. The fringe shall be sewn superimposed upon the hem or selva edge (as applicable) and evenly attached around the flag with a single row of stitching through the center of the fringe heading using seam type LSa-1. When fringe is specified for automobile flags, it shall be attached with 2 rows of stitching at the top and bottom edges and 3 rows of stitching at the fly end.

3.6.4 Color of sewing thread. Except as otherwise noted herein, the color of the thread shall match the color of the material on which it is to be used. The colorfastness of the thread shall be equal to or better than the material on which it is used.

- a. Either red or white colored thread shall be used to sew the fly hem.
- b. Either red or blue colored thread shall be used to sew the top union hem.
- c. The seam joining the union with the stripes shall be sewn with red or blue colored thread on the face side and white thread on the reverse side.
- d. Red colored thread shall be used to close Type II and Type III headings.
- e. When fringe is required, the thread used to sew on the fringe shall match the color of the fringe on the face side and shall be red on the reverse side.

3.7 Headings. Headings shall be of the following types and classes as specified (see 6.2):

3.7.1 Type I, duck. Headings fabricated of duck cloth specified in 3.3.2 shall be constructed in accordance with one of the following subparagraphs as specified.

3.7.1.1 Class 1, with distance line, ring, and snaphook. The construction and dimensions for Type I, Class 1 headings shall be as specified on TIOH Drawing 5-1-45A. The heading shall be made by cutting a piece of duck 6 inches wide and 2 inches longer than the hoist of the flag. The edges and both ends of the duck cloth strip shall be turned in 1 inch. The duck cloth strip shall be doubled over to form a 2 inch wide heading. The hoist end of the flag shall be turned in 3/4 inch making 2 thicknesses, and this folded end (which may be stitched) shall then be

inserted between the edges of the duck cloth for a distance of 1 inch so that the ends of the inserted flag hoist are not exposed. With the turned-in sides and ends of the duck cloth placed even, the hoist end of the flag and the open side of the heading shall be stitched with 4 rows of equidistant stitching 1/4 to 3/8 inch gauge (1/8 stitching margin). The flag shall have a distance line specified in 3.3.6 running through the heading in accordance with the applicable figure for Type I, Class 1 headings. The line at the top of the heading shall pass through a ring specified in 3.3.8, doubled back and superimposed upon itself for a distance of not less than 2 inches and sewn with zig-zag stitches through both thicknesses of the line for a minimum distance of 2 inches. The line shall then be drawn into the heading until the ring is approximately flush with the outer edges of the heading. The top of the heading shall then be closed by 2 rows of stitching 1/4 to 1/2 inch gauge, either up to or through the rope. The distance line shall be secured within the heading by zig-zag stitching at the top, center, and bottom for a minimum of 2 inches at each location. The lower end of the heading shall then be closed by 2 rows of stitching in the same manner as the top. The snaphook specified in 3.3.8 shall be attached to the distance line by passing the line through the swivel loop, doubled back and superimposed upon itself for a distance of not less than 2 inches and sewn by zig-zag stitching for a minimum of 2 inches. Zig-zag stitching at the top and bottom of the line shall pass through both thicknesses of the distance line. Prior to zig-zag stitching, the free end of the distance line shall be fused. The overall length of the extended portion of the distance line and snaphook, measured from the lower edge of the heading, shall be 24 inches.

3.7.1.2 Class 3 with distance line and galvanized steel thimbles. The Class 3 heading shall be constructed in accordance with TIOH Drawing 5-1-45G and 3.7.1.1 above except that the heading shall be fitted with thimbles specified in 3.3.9 so as to provide a loop or eye not less than 1-1/2 inches in length.

3.7.1.3 Class 2, with grommets. The construction and dimensions for Type I, Class 2 headings shall be as specified on TIOH Drawing 5-1-45B. The heading shall be made with a piece of duck cloth 6 inches wide and 5 inches longer than the flag hoist to which it is to be attached. Both side edges shall be turned-in 1 inch and both ends turned-in 2-1/2 inches. The hoist end of the flag shall be turned-in 3/4 inch and then inserted 1 inch into the duck cloth strip so that the ends are not exposed. The raw edges of the ends of the duck cloth strip may be closed with two rows of stitching using a 1/8 stitching margin. The duck cloth strip shall then be doubled over to form a finished heading 2 inches wide. With the sides and ends of the duck cloth strip even, 2 rows of stitching (not less than 3/16 inch stitching gauge, 1/8 stitching margin) shall be sewn through all thicknesses. Single rows of stitching shall be placed along the centerfold edge and ends of the duck cloth strip using a 1/8 to 1/4 inch stitching margin. The duck cloth heading shall be finished by securely clinching 2 grommets, specified in 3.3.7, in the position shown on TIOH Drawing 5-1-45B.

3.7.1.4 Class 3 with distance line and galvanized steel thimbles. The Class 3 heading shall be constructed in accordance with TIOH Drawing 5-1-45G. The heading shall be fitted with thimbles specified in 3.3.9 so as to provide a loop or eye not less than 1-1/2 inches in length.

3.7.1.5 Class 4 with grommets and leather tabs. The construction and dimensions for Type I, Class 4 heading shall be as specified on TIOH Drawing 5-1-45D. The heading shall be made of duck cloth specified in 3.3.2 cut 8 inches wide and 5 inches longer than the hoist of the flag. The hoist end of the flag shall be positioned 1 inch in from the side edge of the duck cloth, 2-1/2 inches from each end and stitched with 1 row of stitching. The side edge of the duck cloth attached to the flag shall be turned-in 1 inch so that a 1 inch strip of flag material the same length as the hoist shall be folded inside the turned-in duck cloth fold as shown on TIOH

Drawing 5-1-45D. The opposite side edge of the duck cloth shall also be turned-in 1 inch. The ends of the duck cloth strip shall be turned-in 2-1/2 inches. The raw edges of the top and bottom duck cloth ends shall be stitched closed with a single row of stitching with a 1/8 inch stitching margin. A leather tab specified in 3.3.10, 3/4 inch \pm 1/16 inch wide and not less than 2 inches long and having a slit and eyelet not more than 3/4 inch \pm 1/16 inch long for fastening tab over a knob or button of the flagstaff, shall be centered and placed flush with each end of the duck cloth headings as shown on TIOH Drawing 5-1-45D. The slit and eyelet shall be centered on the width of the tab 1/4 to 5/16 inch from the center of the eyelet to the outer end of the tab and shall run parallel to the tab length. The tabs shall be secured through the 2 thicknesses of duck cloth by box stitching as shown on TIOH Drawing 5-1-45D. Stitching shall be securely backstitched. Four grommets specified in 3.3.7 shall be clinched into positions as indicated on TIOH Drawing 5-1-45D. The duck cloth heading shall be doubled over to form a heading width of at least 2-3/4 inches. Position the sides and ends of duck cloth evenly, with the grommet holes aligned, and sew 2 rows of stitching not less than 3/16 inch gauge, 1/8 inch margin through all thicknesses.

3.7.2 Type II, tube or tunnel type with sheeting and leather tabs. The heading shall be of the tube or tunnel type for the insertion of a flagstaff, and shall be made with cotton sheeting specified in 3.3.3.1. The construction and dimensions for Type II headings shall be as specified on TIOH Drawing 5-1-45E. The sheeting shall be 6 inches wide and 5 inches longer than the hoist of the flag. Each end shall be folded under 2-1/2 inches. The sheeting shall be fitted with a tab of leather specified in 3.3.10 at each end. Each tab shall be 3/4 inch \pm 1/16 inch wide and not less than 2 inches long. Each tab shall have a slit and eyelet 3/4 inch \pm 1/16 inch long for fastening over a knob or a button on the flagstaff. The slit and eyelet shall be centered on the width of tab as shown on TIOH Drawing 5-1-45E. The tabs shall be placed within the heading and centered opposite the stitching of the hem. The outer end of each tab shall be flush with the end of the heading. The tabs shall be secured through the 2 thicknesses of lining by box stitching as shown on TIOH Drawing 5-1-45E. As an alternate, the leather tabs may be secured by stitching through both lining and heading material. Stitching shall be securely backstitched. The contractor's label specified in 3.8.2 shall be affixed at the same time the tabs are placed on the sheeting. The sheeting strip shall be placed on the back of the flag at the hoist end with the folded ends of the strip flush with the hemmed or selvage edges of the flag at the top and bottom and attached thereto by a single row of stitching across each folded end of the strip. The raw edge side of the strip shall be placed 1/2 inch from the raw edge of the flag. The tube or tunnel shall then be formed by hemming the hoist end of the flag with the sheeting strip inside. Sheeting may also be seamed separately with a 1/2 inch seam to form a tunnel. In that case, turn under the hoist edge of the flag 1/2 inch and insert under folded side edge of the sheeting strip. Turn-under shall be stitched with a single row of stitching (3/16 margin) which shall pass through both the turned edge of the flag and both edges of the unseamed or seamed lining strip. The flag width of the finished hem shall not be less than 2-3/4 inches.

3.7.3 Type III, Class 2 with leather tabs. The automobile flags (and other flags when required) shall have the hoist end hemmed after insertion of the leather tabs specified for Type III, Class 2 headings on TIOH Drawing 5-1-45F. Two rectangular leather tabs 1-3/8 inches long and 5/8 inch wide shall be located and secured within the hem as shown on TIOH Drawing 5-1-45F.

3.8 Marking.

3.8.1 Marking for Type I headings. Flags with Type I headings shall be marked on the heading in accordance with Type IV, Class 9 of MIL-DTL-32075, with letters appropriate to the size of the heading but not more than 3/4 inch high. The lettering shall run along the length of the

headings beginning immediately below the upper grommet on Class 2 headings, and in corresponding position on all other Type I headings. As an alternate, heat transfer marking conforming to Type III of MIL-DTL-32075 may be used for flags with Type I headings. Both types of marking shall contain information required by Class 5 labels and shall be colorfast to accelerated weathering when tested as specified in 4.3.2.

3.8.2 Marking for Type II headings. For flags with Type II headings, the contractor shall affix a label of woven cloth suitable for marking adjacent to the top leather tab. The label shall contain the stock number, nomenclature, contract number, and date. When required by the Government (see 6.2), the words "U.S. PROPERTY" shall be stamped on the heading of the flag.

4. QUALITY ASSURANCE PROVISIONS.

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in this specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 First article inspection. When a first article is required, inspection shall be made on a completely fabricated flag or flags, the number of which shall be determined by the contract or purchase order, for all provisions applicable to end item examination and tests.

4.3 Quality conformance inspection. Inspection shall be in accordance with ANSI/ASQC Z1.4 and the provisions set forth herein, except as otherwise directed by the contract or purchase order (see 6.2).

4.3.1 Certificate of compliance. Components and materials may be accepted on the basis of a contractor's certificate of compliance (COC) for the requirements in Section 3 of the specification. When requested by the government, the contractor shall provide actual test, inspection, or other verifiable data to support the COC.

4.3.2 Testing of components. Testing shall be performed on the components listed in Table III for the characteristics shown therein. The inspection level shall be S-1 and the AQL shall be 6.5 test failures per 100 units. The unit of product to be tested shall be as stated in parentheses in the "component" column unless otherwise specified by the selected test method.

TABLE III. Testing of Components.

COMPONENT	CHARACTERISTIC	REQUIREMENT PARAGRAPH	TEST METHOD	RESULTS REPORTED AS
Nylon or polyester rope (10 ft min.)	Material identification	3.3.6	ASTM-D276	pass/fail
	Breaking strength	3.3.6	CI-1500, paragraph 9	nearest 1 lb.
	Minimum 5/16" diameter for Type 1, Class 3 headings	3.3.6	Visual using 1/16" scale	pass/fail

TABLE III. **Testing of Components.** - continued

COMPONENT	CHARACTERISTIC	REQUIREMENT PARAGRAPH	TEST METHOD	RESULTS REPORTED AS
Cotton duck	Breaking strength	3.3.2	ASTM-D5034 Grab Test	nearest 1 lb
Marking for Type I heading	Colorfastness to accelerated weathering	3.8.1	AATCC-111, Option A <u>1/</u>	pass/fail

1/ With a time exposure of 100 standard hours.

4.3.3 In-process inspection. Inspection may be performed at any point or during any phase of the manufacturing process to determine compliance with the requirements of Section 3. The Government reserves the right to exclude from consideration for acceptance any material or component for which in-process inspection has indicated nonconformance.

4.3.4 Inspection of the end item.

4.3.4.1 Visual inspection of finished flags. Examination of flags for the defects shown in TABLE IV shall be made at a distance of 18 to 40 inches with good illumination. Inspection level shall be I; AQL's expressed in defects per 100 units shall be 4.0 for major defects and 10.0 total for major and minor. One finished flag shall be equal to one unit.

TABLE IV **Visual inspection of finished flags.**

EXAMINE	DEFECT	CLASSIFICATION	
		MAJOR	MINOR
<u>Quality of cloth</u>			
Type	Any component not fabricated of specified material . .	X	
Color	Basic colors other than specified	X	
	Off shades, seriously affecting appearance	X	
Material	Off shades, affecting appearance but not seriously . .		X
	Hole, cut, tear, smash, or weak place	X	
	Spots, stains, streaks, or shade bars affecting appearance seriously	X	
	Spots, stains, streaks, or shade bars affecting appearance, but not seriously		X
	Two or more contiguous broken or missing ends or picks	X	
	Double pick, coarse pick, or mispick clearly noticeable		X
	Slub, slough-off, float, or skips seriously affecting appearance or serviceability	X	
	Slub, slough-off, float, or skips affecting appearance or serviceability, but not seriously.		X
<u>Quality of distance line</u>			
Type	Not fabricated of specified material	X	
Twist or braiding	Uneven or loose, resulting in weak place	X	

TABLE IV Visual inspection of finished flags. - continued

EXAMINE	DEFECT	CLASSIFICATION	
		MAJOR	MINOR
	Any cut	X	
	Chafing, fraying, or abrasion seriously affecting serviceability	X	
	Chafing, fraying, or abrasion affecting serviceability, but not seriously		X
<u>Quality of metal components</u>			
Snap hook & ring	Not fabricated of specified material	X	
Grommet or thimble (as applicable)	Broken, cracked, or malformed	X	
	Contains rough or sharp edges		X
<u>Quality of leather components</u>			
	Not fabricated of specified leather		X
	Hole (other than required), cut, tear, or weak place . . .	X	
<u>Quality of fringe & cords & tassels</u>			
	Material, type, construction, color, or color combination not as specified	X	
	Frayed edges	X	
	Spotted, stained or soiled, seriously affecting appearance	X	
	Spotted, stained or soiled, affecting appearance, but not seriously		X
	Cut or tear	X	
	Wood mould not completely covered by braid		X
	Wood mould loosely or unevenly covered.		X
<u>Construction & workmanship</u>			
General	Operation omitted or not accomplished as specified . .	X	
	Component is not the required type, class, or size . . .	X	
	Warp threads of the basic cloth of the flag in other than fly direction of the flag	X	
Seams, stitches, & stitchings	Wrong type of seam, stitches, or stitching	X	
	Wrong color thread	X	
	Row of stitches partially or completely missing	X	
	Wrong stitching gauge or margin		X
	Seams improperly formed, material caught in unrelated stitching operations		X
	Ends of stitching not backstitched at least 1 inch (when not caught in other seams or stitches)		X
	Needle chews	X	

TABLE IV Visual inspection of finished flags. - continued

EXAMINE	DEFECT	CLASSIFICATION	
		MAJOR	MINOR
Stars (embroidery or appliquéd design)	Any raw edge exceeding 1/2 inch in length	X	
	Loose stitch tension resulting in a loosely secured seam		X
	Tight stitch tension (stitches break when normal pull is exerted in length-wise direction of seam or stitching)	X	
	Stitches per inch for seams, hems, & reinforcement patches: <u>1</u>		
	- 4 or more stitches less than specified	X	
	- 1 to 3 stitches less than specified		X
	Stitches per inch for duck cloth headings: *		
	- 2 or more stitches less than specified	X	
	- 1 stitch less than specified		X
	Stitches per inch for appliquéing: *		
	- 5 or more stitches less than specified	X	
	- 1 to 4 stitches less than specified		X
	Seam twisted, pleated, or puckered, seriously affecting appearance	X	
	Seam twisted, pleated, or puckered, affecting appearance but not seriously		X
	Broken or skipped stitches in heading seam causing an unstitched length of 1 inch or more	X	
	Broken or skipped stitches in heading seam causing an unstitched length of less than 1 inch		X
	Broken or skipped stitches in any other seam causing an unstitched length of 1/2 inch or more	X	
	Broken or skipped stitches in any other seam causing an unstitched length of less than 1/2 inch		X
	Run-offs resulting in open seam		X
	Broken stitches	X	
	Not appliquéd as specified	X	
	Stars inverted	X	
	Stars misplaced or in wrong location	X	
	Pattern marks used for location of design visible.		X
	Appliquéd stars not neatly trimmed		X
	Malformed stars seriously affecting appearance	X	
Malformed stars not seriously affecting appearance		X	
Incorrect cartoon used	X		
Stitches not covering base cloth (front & back)		X	
Execution of embroidery not clear & distinct		X	
Incorrect span used	X		
Incorrect yarn used	X		
Evidence that sizing or stiffening agent used as an aid in sewing had deleterious effect	X		
Hems	Nylon flags not hemmed on all edges.	X	
	Raw edges not hemmed on flags other than nylon	X	

TABLE IV Visual inspection of finished flags. - continued

EXAMINE	DEFECT	CLASSIFICATION	
		MAJOR	MINOR
Reinforcement patches	Hems uneven		X
	Hem on wrong side of flag		X
	Positioned on face side of flag		X
	Portion of patch at heading not inserted within the heading as specified		X
	Not same color or material as section reinforced	X	
Fringe	Size or shape of patch not as specified		X
	Not completely attached as specified	X	
	Ends of fringe not caught in heading stitching		X
	Not one continuous length		X
	Not stitched to the front side of the flag		X
	Not evenly attached around the flag		X
	Stitching of fringe not through center portion of the fringe heading		X
Headings: Type I, Classes 1 & 3	1/2 of fringe not visible on reverse side of flag		X
	Lower end of line not passed through snap hook & sewn to itself, as applicable	X	
	Length of zig-zag stitching not as specified		X
	Zig-zag stitching not sewn completely through all thicknesses of heading and line at any of the required locations	X	
	Lower edge of ring more than 1/2 inch above or within the upper end of heading, as applicable		X
	Ends of heading not closed by 2 rows of stitching up to distance line	X	
	Free end of distance line not whipped as specified		X
	Sides and ends of duck cloth heading out of alignment, seriously affecting appearance	X	
Headings: Type I, Class 2	Sides and ends of duck cloth heading out of alignment, affecting appearance but not seriously		X
	Grommet clinched too tightly, cutting cloth	X	
	Wrong type of grommet		X
	Grommet improperly set, e.g., clinched too loosely, allowing grommet to rotate		X
	Sides & ends of duck cloth heading out of alignment, seriously affecting appearance	X	
Headings: Type I, Class 4	Sides & ends of duck cloth heading out of alignment, affecting appearance but not seriously		X
	Grommet clinched too tightly, cutting cloth	X	
	Wrong type grommet		X
	Grommets improperly located	X	
	Sides & ends of duck cloth heading not properly aligned, seriously affecting appearance	X	

TABLE IV Visual inspection of finished flags. - continued

EXAMINE	DEFECT	CLASSIFICATION	
		MAJOR	MINOR
Headings: Type II	Sides & ends of duck cloth heading not properly aligned, affecting appearance but not seriously		X
	Grommet improperly set, e.g., clinched too loosely, allowing grommet to rotate		X
	Leather tab not positioned & attached as shown on applicable drawing	X	
	Sheeting all or partially missing	X	
	Heading improperly formed, e.g., both edges of the sheeting or hoist end of flag not caught entire length of heading seam		X
Headings: Type III, Class 2	Leather tabs not positioned & attached as shown on applicable drawing		X
	Hemmed heading not as shown on the applicable drawing		X
	Leather tabs not positioned & attached as shown on applicable drawing		X
Marking	Missing, incorrect, illegible, text incomplete, marking in wrong location, size of lettering not as specified, or color of marking not as specified		X
Label	Text incomplete or incorrect, not attached as specified, not in location specified, or not in position specified		X

1/ NOTE: Variation in the number of stitches per inch caused by the operator speeding up the machine or pulling cloth, such as sewing over heavy places or turning corners, shall be classified as follows: major to minor; minor to no defect.

4.3.4.2 Examination of flags for defects in dimension. Flag shall be examined for the dimensional defects shown in TABLE V. Inspection level shall be S-3; AQL's expressed in defects per 100 units shall be 6.5 for major defects and 15.0 total for major and minor. One finished flag shall be equal to one unit.

TABLE V. Examination of flags for defects in dimension.

EXAMINE	DEFECT	CLASSIFICATION	
		MAJOR	MINOR
Overall length (minus heading)	Not within specified tolerance ($\pm 5\%$)	X	
Overall width of basic flag	Not within specified tolerance ($\pm 5\%$)	X	
Canton dimensions	Not within specified tolerance ($\pm 5\%$)	X	

TABLE V. Examination of flags for defects in dimension. - continued

EXAMINE	DEFECT	CLASSIFICATION	
		MAJOR	MINOR
Width of heading	Varies from specified finished width by: <ul style="list-style-type: none"> • 1/2 inch or more • more than 1/4 inch but less than 1/2 inch 	X	X
Dimensions A, B, C, or D	Maximum measurements differ by more than 2% of the required dimensions	X	
Design of stars and star field	Out of dimension or out of balance: <ul style="list-style-type: none"> - the top point of each star is not pointing upward . - each star is not symmetrical if dissected by an imaginary vertical line - stars are not of uniform size - stars are not arranged symmetrically (horizontal, vertical, & diagonal arrangement) - star field is not centered within the union • seriously affecting serviceability or appearance . . . • affecting serviceability or appearance but not seriously 	X	X

5. PACKAGING

5.1 Department of Defense (DOD) procurement. Flags contracted for by DOD shall be preserved, packaged, and marked in accordance with sound commercial practices and with requirements specified in 5.1 through 5.1.5, or as specified in the contract or purchase order (see 6.2). The complete package shall be designed to protect the flags against damage during shipment, handling, and storage. Flags requiring distance lines shall have the exposed portion of all attached hardware wrapped or covered in commercially acceptable polyethylene film 0.002 inch thick or better.

5.1.2 Unit packaging.

5.1.2.1 Cotton, nylon, and nylon-wool bunting flags. Unless otherwise specified in the contract or purchase order, following any treatment or wrapping/packaging for preservation, each flag shall be compactly folded or folded and rolled and placed in a transparent, close-fitting, end-opening polyethylene bag. The polyethylene film shall be not less than 0.003 inch thick. All seams and closures shall be heat sealed. Prior to or during the heat sealing operation, excess air within the bag shall be expelled.

5.1.2.2 Flags of rayon banner cloth. Unless otherwise specified in the contract or purchase order, each flag shall be laid out flat on two thicknesses of tissue paper. The tissue paper shall overlap all edges of the flag a minimum of two inches. Each flag, combined with overlapping tissue paper, shall be rolled open width on a convolute or spiral wound chipboard tube. The tissue paper overlapping the tube shall be tucked inside the tube ends. Each flag shall be tightly wrapped with 50-pound minimum basis weight untreated kraft paper. Each wrapped flag shall then be individually packaged in a snug fitting corrugated box, class domestic, style optional. Closure shall be in accordance with good commercial practices.

5.1.3 Intermediate packaging. When specified in the contract or purchase order, flags of one size, style, material, type, and class only, unit packaged as specified in 5.1.2, shall be neatly stacked and packed within a snug-fitting corrugated box, class domestic, style optional. Closure and reinforcement of the boxes shall be in accordance with good commercial practices. The weight of the contents of each such box shall not exceed 65 pounds.

5.1.4 Packing. Packing and shipping within the U.S. shall be acceptable by common carrier under the National Motor Freight Classification and Uniform Freight Classification (see 2.2). Pallets or skids used for import and export shipping shall be in compliance with the International Plant Protection Convention (IPPC) standard ISPM #15 cited in 2.2.

5.1.4.1 Use of intermediate packaging. When specified in the contract or purchase order, packaging as specified in 5.1.3 shall be considered final packing, and no further packing shall be required.

5.1.4.2 Other packing. Packing shall be commercial as specified in the contract or purchase order.

5.1.5 Marking. In addition to any special marking required by the contract or order, unit packages, intermediate packages, and shipping containers shall be marked in accordance with MIL-STD-129.

5.2 Civil agency procurement.

5.2.1 Preservation, packaging, and packing. Preservation, packaging, and packing shall be as specified in the contract or purchase order (see 6.2).

5.2.2 Marking. Marking shall be as specified in the contract or purchase order (see 6.2).

6. NOTES. INFORMATION FOR GUIDANCE ONLY. (This section contains information of a general or explanatory nature that is helpful, but is not mandatory.)

6.1 Intended use. The flag and Union Jack covered by this specification are intended to be used as the National Flag and National Ensign of the United States of America by all civil and military activities of the Government.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Material, star design application, heading (type and class), and size (see 1.2). When nylon is required, specify lightweight or heavyweight.
- c. When a first article is required (see 3.1) and number of items to be inspected, arrangements for inspection, application of test results, and disposition of first article(s).
- d. When artificial leather is required for tabs (3.3.11). (Also see 6.3.)
- e. Fringe, when required (3.3.12).
- f. Cords and tassels, when required (see 3.3.13).

- g. What drawings and cartoons (3.4.1.3) will be required and where to obtain them.
- h. When "U.S. PROPERTY" marking is required (see 3.8.2).
- i. Guidance on or requirements for packaging and packing (see Section 5) if different from the specification.
- j. Any other changes from the specification as required by the contract or purchase order.

6.3 When artificial leather is required in lieu of deerskin or cattlehide for tabs, all reference to "leather" shall be substituted by "artificial leather."

6.4 Subject term (key word) listing.

Appliqué
 Distance line
 Embroidery
 Grommets
 Heading
 Schiffli
 Snap hooks and rings
 Stars
 Stripes
 Thimble

Changes from previous issue: Asterisks or vertical lines are not used in this revision to identify changes with respect to the previous issue due to the extensive changes.

MILITARY INTERESTS:

Military Coordinating Activity

Army-IH

Custodian

Army-IH

Review Activity

DLA-CT

CIVIL AGENCY COORDINATING ACTIVITIES: GSA-FSS

PREPARING ACTIVITY:

Army-IH

Project No. 8345-0238/001

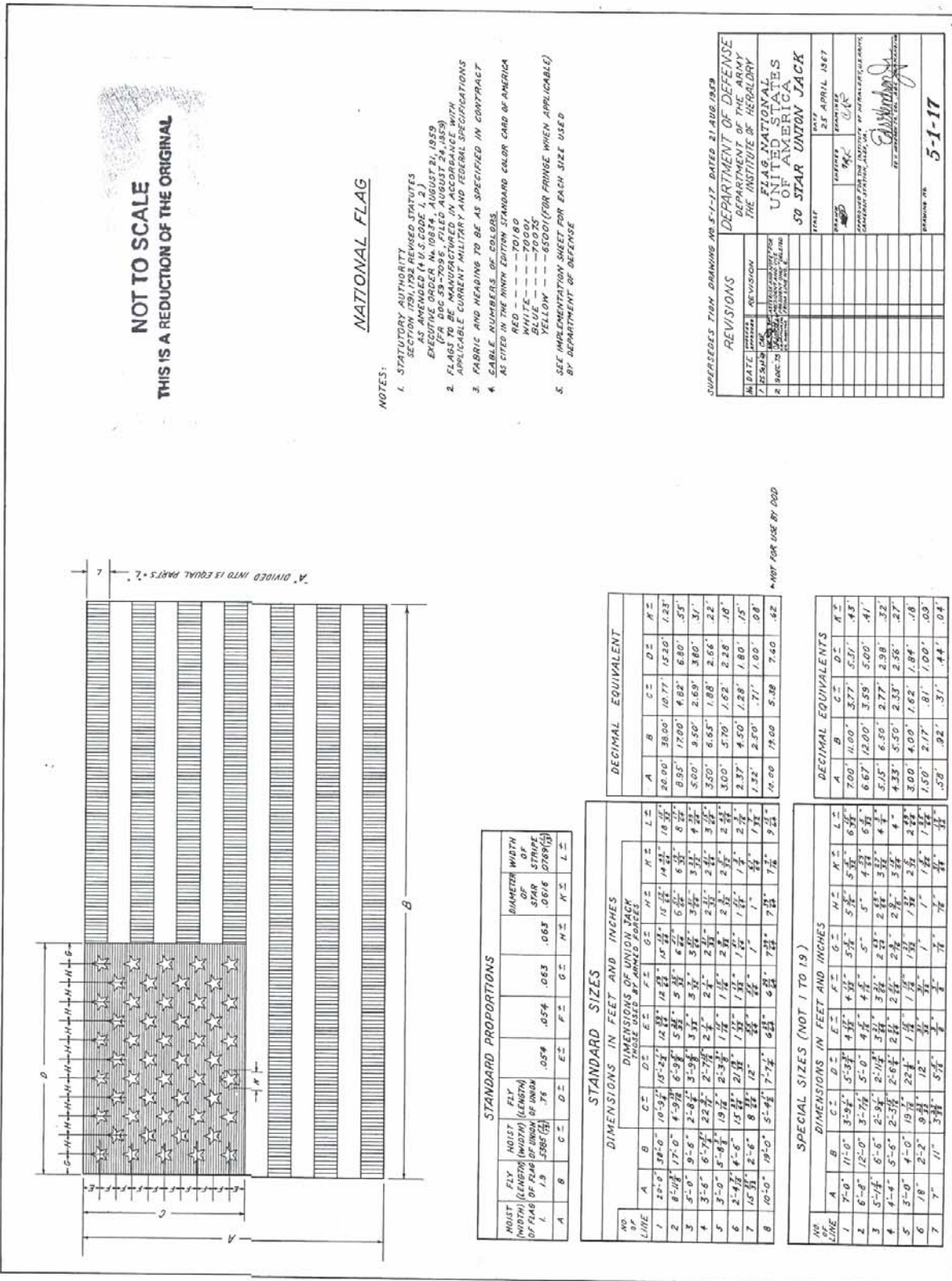
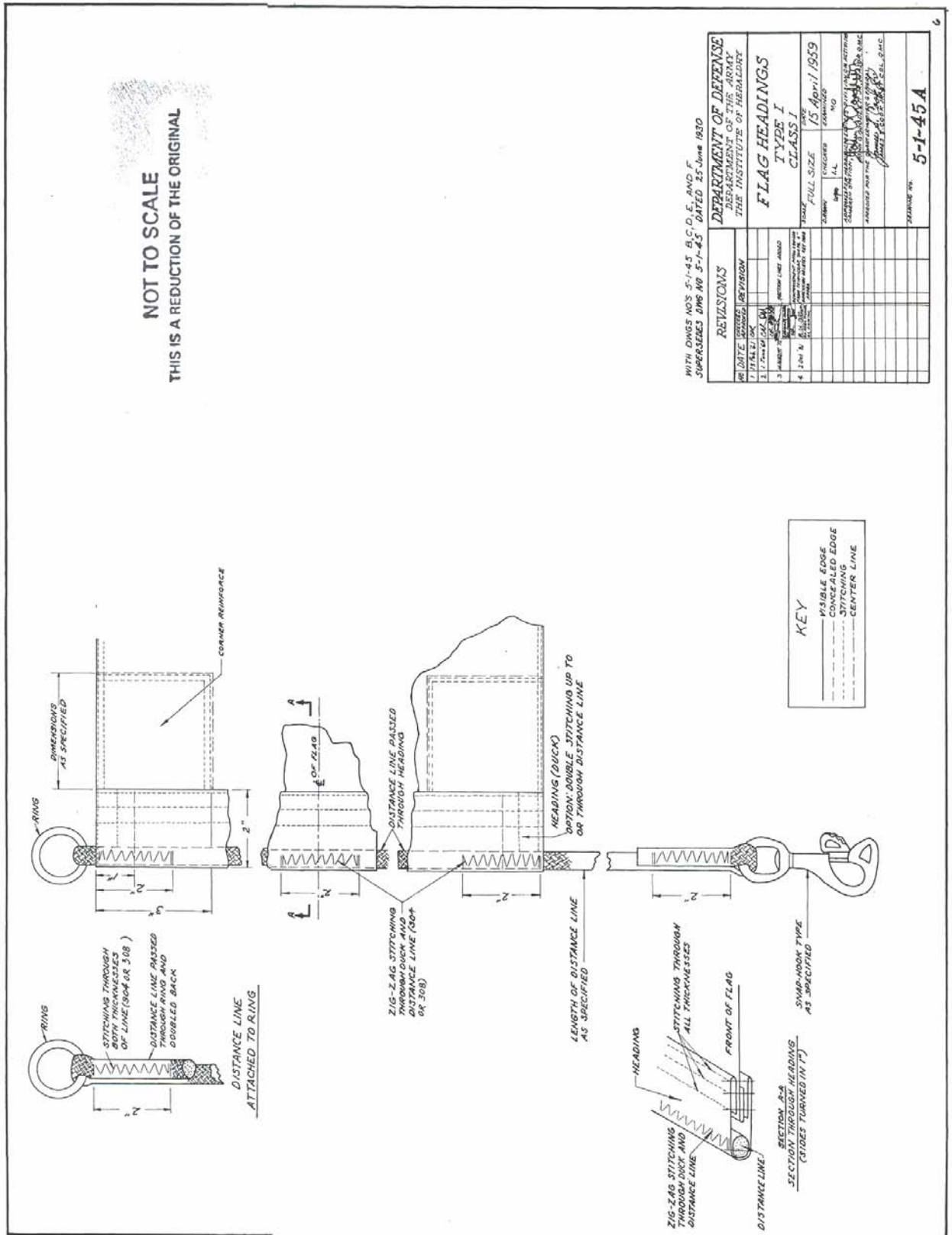


Figure 1. Flag, National, United States of America 50 Star Union Jack

NOT TO SCALE
THIS IS A REDUCTION OF THE ORIGINAL



WITH DWGS NOS 5-1-45 B, C, D, E, AND F
SUPERSEDES DWG NO 5-1-45 DATED 25 June 1930

REVISONS		DEPARTMENT OF DEFENSE THE INSTITUTE OF HERALRY	
NO	DATE	REASON	BY
1			
2			
3			
4			

CLASS I	
FORM FULL SIZE	155
DATE	11/1959
NO	
APPROVED FOR PUBLICATION	
APPROVED FOR THE DEPARTMENT OF DEFENSE	
DATE: 10/15/59	
DRAWN BY: [Signature]	
CHECKED BY: [Signature]	
DATE: 10/15/59	
DRAWING NO. 5-1-45A	

Figure 2. Flag Headings, Type I, Class 1

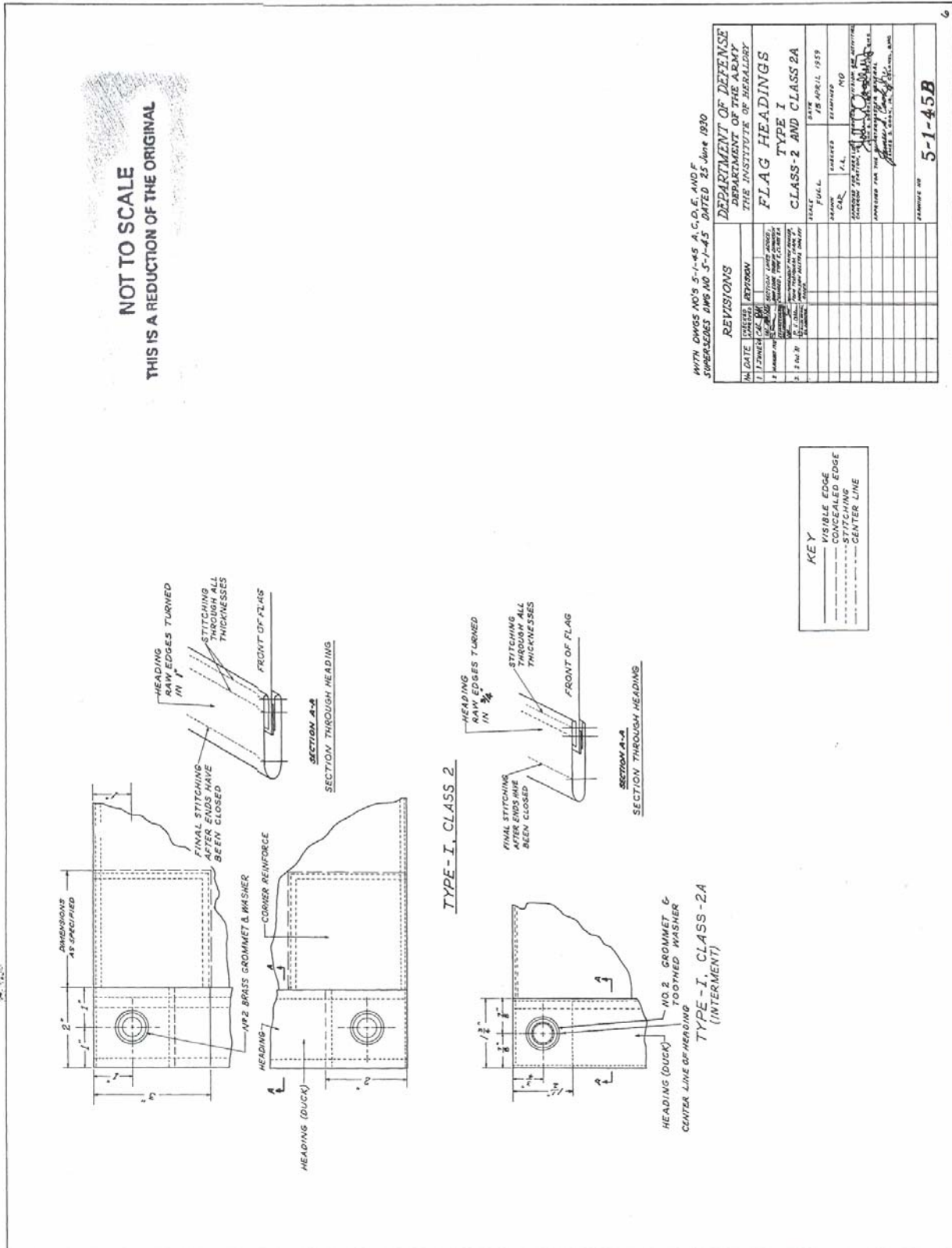


Figure 3. Flag Headings, Type I, Class 2 and Class 2A

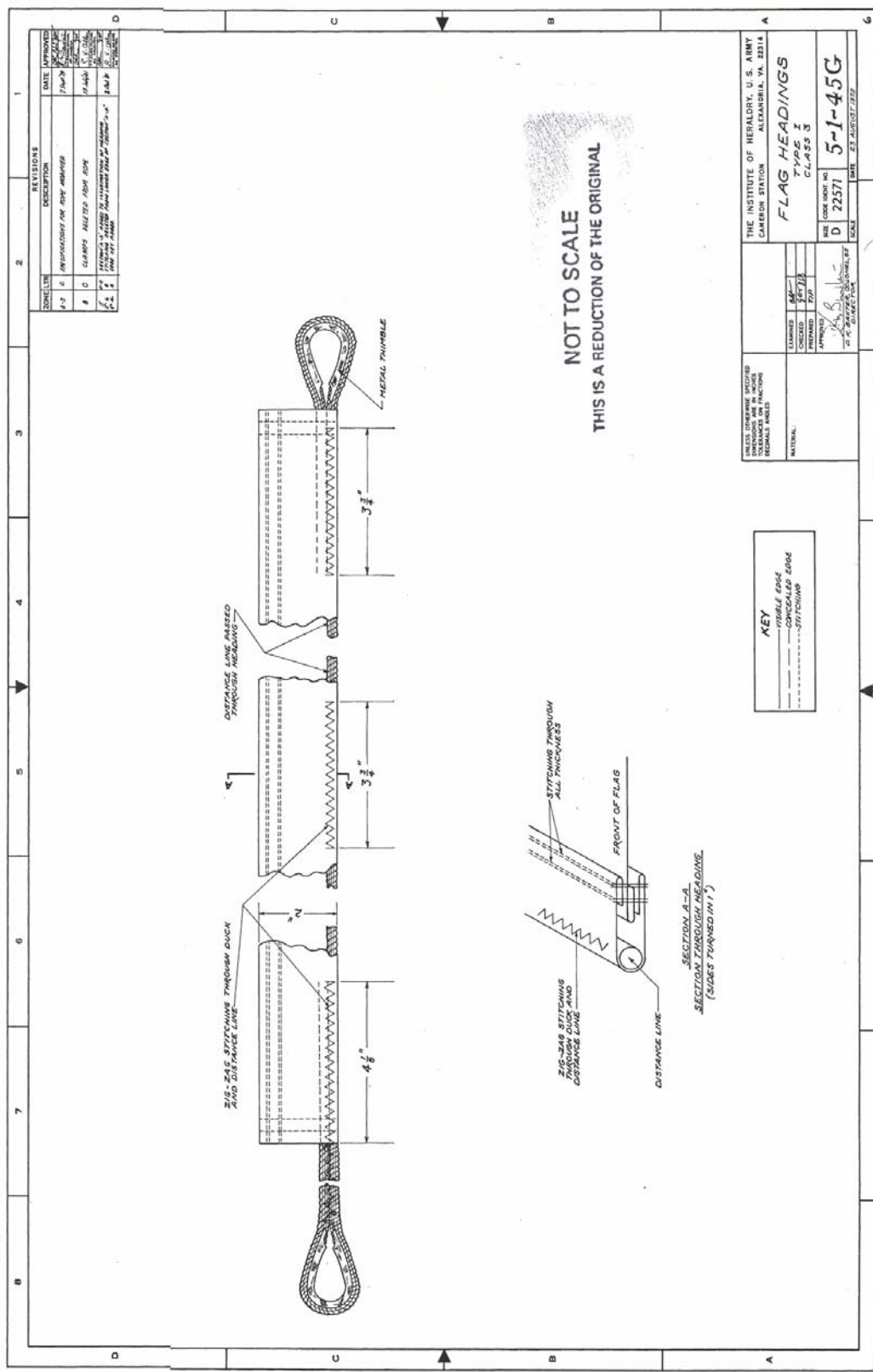


Figure 4. Flag Headings, Type I, Class 3

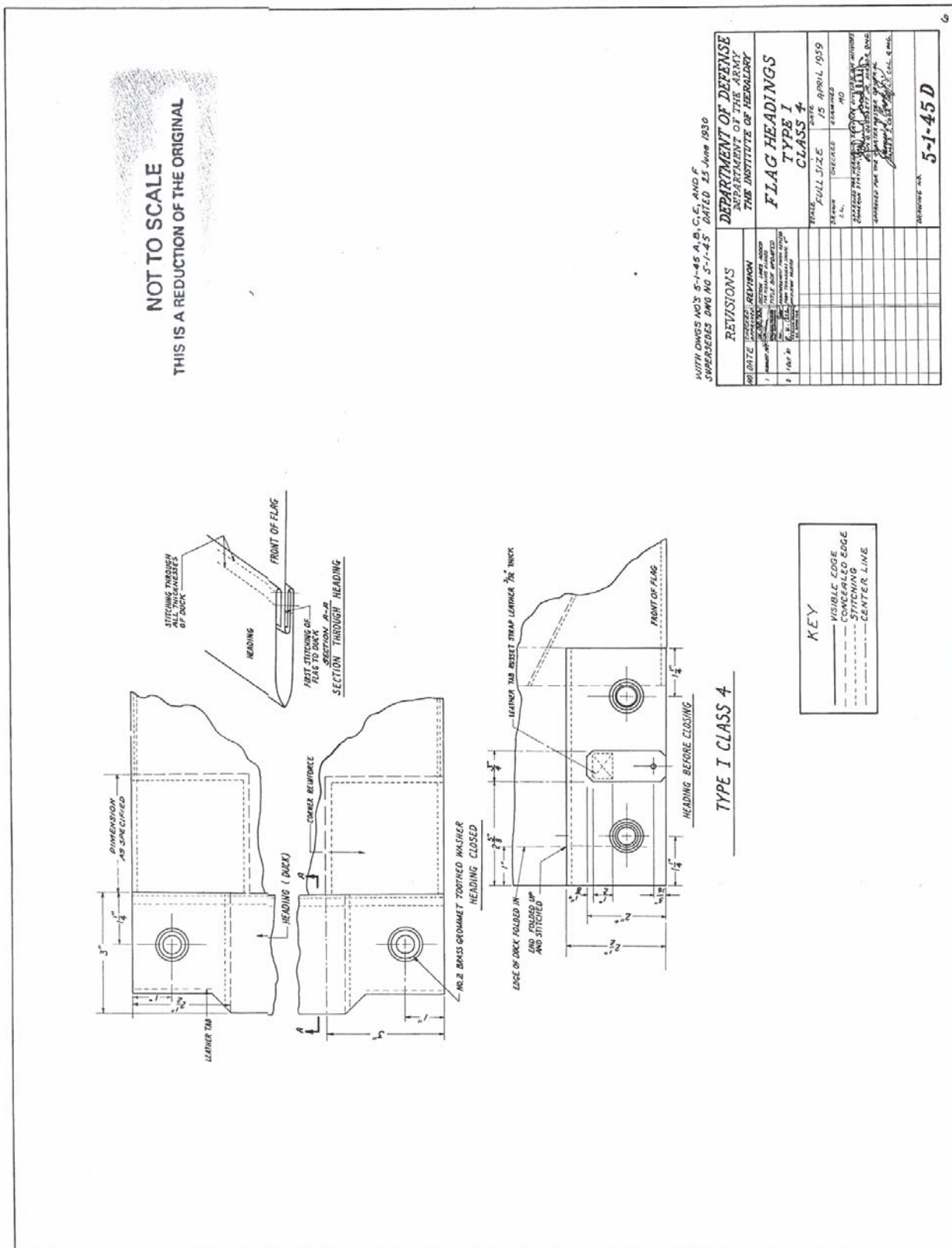


Figure 5. Flag Headings, Type I, Class 4

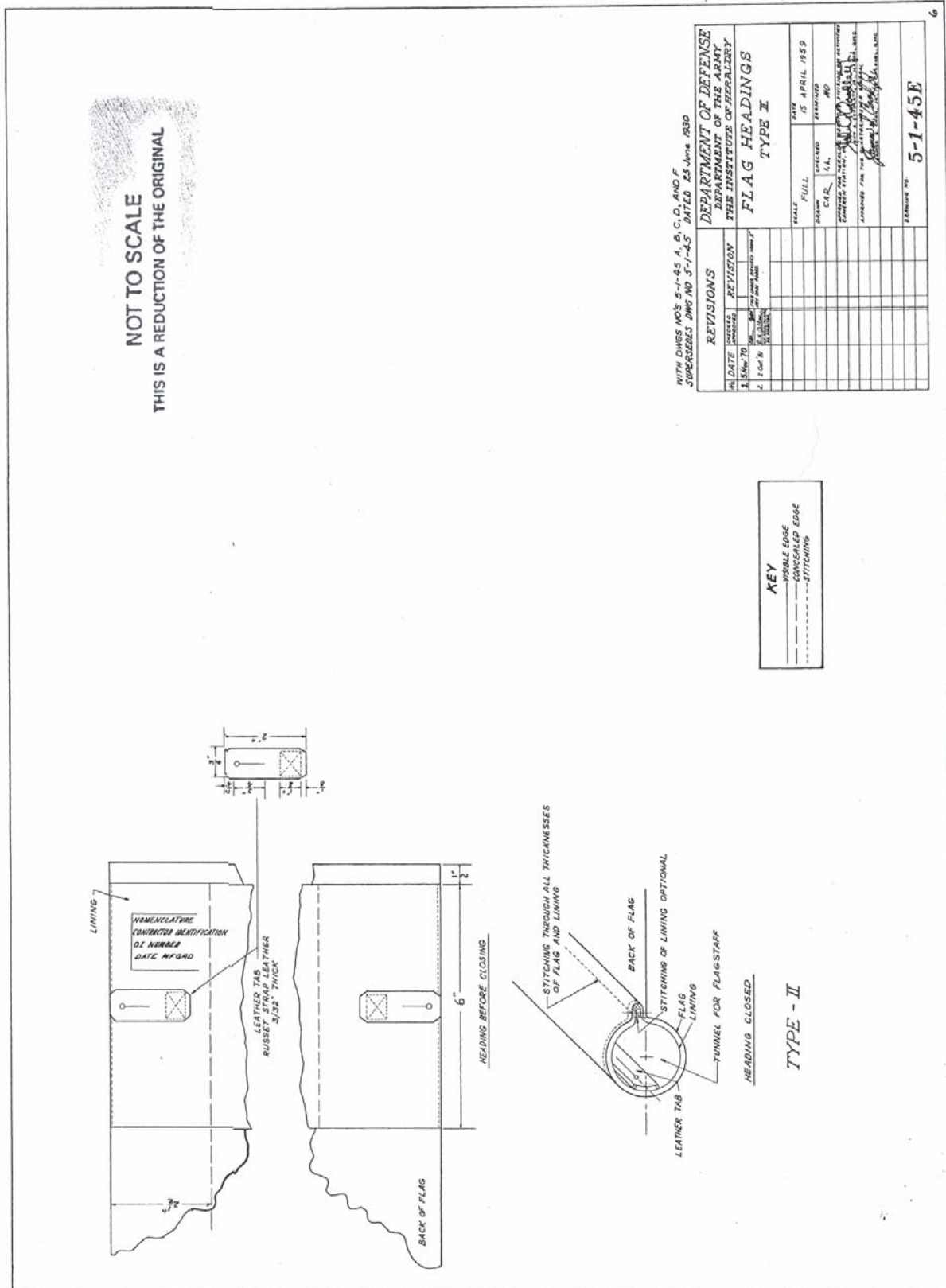


Figure 6. Flag Headings, Type II

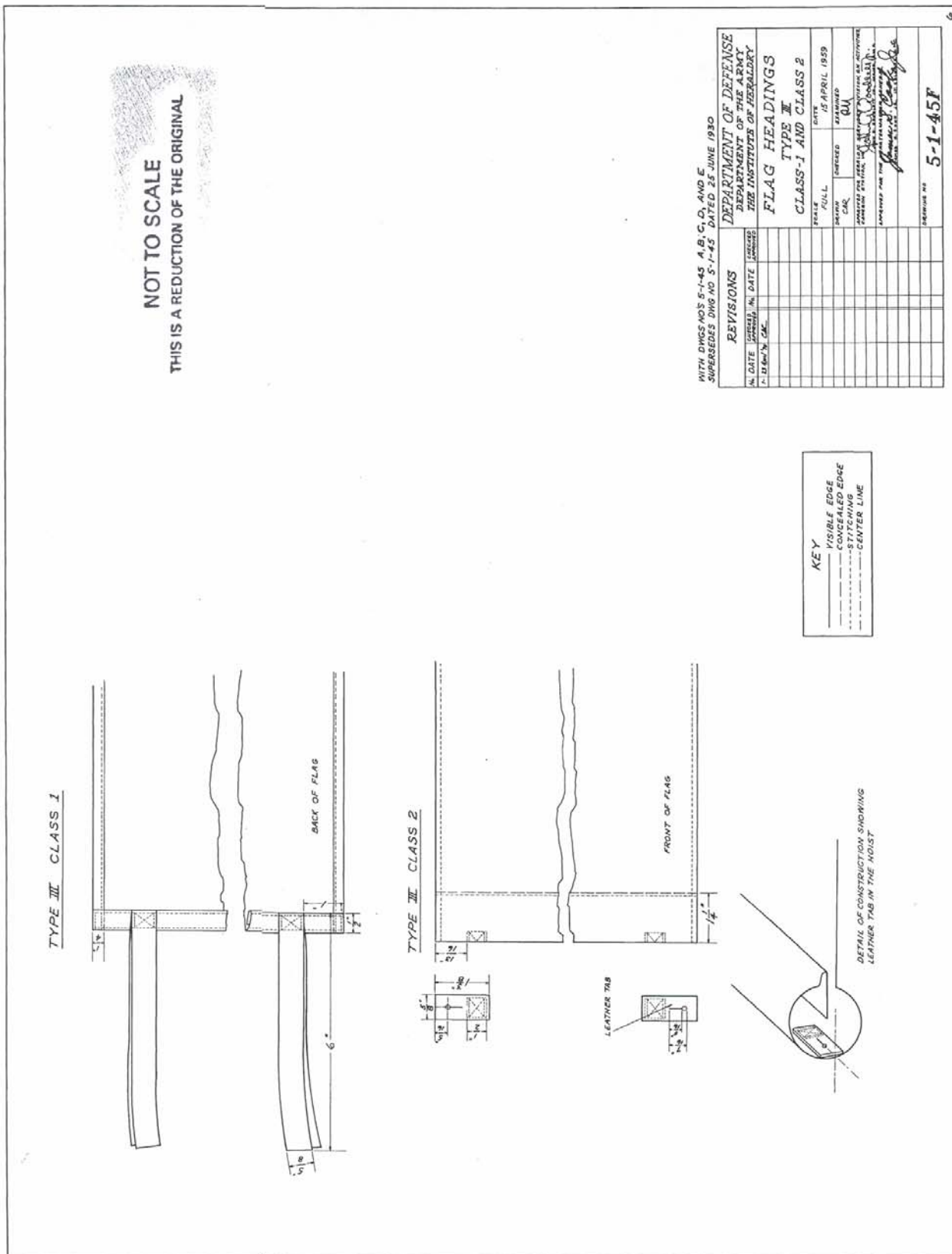


Figure 7. Flag Headings, Type III, Class 1 and Class 2