DEPARTMENT OF THE TREASURY
BUREAU OF ENGRAVING AND PRINTING
WASHINGTON, DC 20228

BEP SPECIFICATION FOR LABELS: PRESSURE SENSITIVE, CURRENCY BUNDLE AND CASH-PAK

1.0 SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers performance and acceptance requirements for pressure sensitive labels suitable for use on currency bundles and Cash-Paks at all Bureau of Engraving and Printing sites, hereinafter referred to as the "BEP".

1.2 Classification.

1.2.1 Sets. Printed sets of labels for 100,000 sheet process (100K Process Set) consist of 3,200 bundle labels and 200 Cash-Pak labels. Printed sets of labels for 200,000 sheet process (200K Process Set) consist of 6,400 bundle labels and 400 Cash-Pak labels. (See Table 1)

1.2.2 Types. The two types of bundle labels are old currency design and new currency design labels. The two types of Cash-Pak labels are solid color block labels and diagonal dropout color block labels. (See Table 1)

1.2.3 Color. A color block on both bundle and Cash-Pak labels denotes the denomination of the labeled currency. One-dollar notes are denoted by the absence of a color block on the bundle labels. (See Table 3)

1.2.4 Blank labels. Blank, colored-coded bundle and Cash-Pak labels intended for thermal transfer printing.

1.2.5 Federal Reserve Bank (FRB) Eagle Labels. The FRB Eagle labels are identified as BEP Stock Item Number 1L001960, 1L001961, and 1L001962. (See attachments 8, 9, and 10)

1.2.6 Additional Labels. Additional labels may be identified for use by the BEP. BEP stock item numbers will be assigned to the labels as needed.

1.2.7 Test Labels. Test labels are labels needed for testing new equipment, processes, and procedures as determined by BEP. Test labels will only include what is needed for the testing. Testing labels may need minor modifications from the regularly ordered labels.

Table 1 SETS AND TYPES OF LABELS FOR BUNDLES AND CASH-PAK

Attachment	ITEM DESCRIPTION	UNIT OF MEASURE	UNIT DESIGNATION	TYPE
1, 6	PRINTED PROCESS LABEL ($1) 200K SET A	ROLL	6,400 LABELS	OCD
1, 6	PRINTED PROCESS LABEL ($2) 200K SET B	ROLL	6,400 LABELS	OCD
2, 6	PRINTED PROCESS LABEL 100K SET C	ROLL	3,200 LABELS	NCD
2, 6	PRINTED PROCESS LABEL 100K SET D	ROLL	6,400 LABELS	NCD
2	PRINTED BUNDLE LABEL ROLL 100K SET E	ROLL	3,200 LABELS	NCD
2	PRINTED BUNDLE LABEL ROLL 200K SET F	ROLL	6,400 LABELS	NCD
6	PRINTED CASH-PAK LABEL ($50 & $100) 200K SET G	ROLL	400 LABELS	NCD
6	PRINTED CASH-PAK LABEL 200K SET H	ROLL	400 LABELS	NCD
3	BLANK BUNDLE LABEL THERMAL TRANSFER I ($1)	ROLL	3,300 LABELS	OCD
4	BLANK BUNDLE LABEL THERMAL TRANSFER J	ROLL	3,300 LABELS	NCD
5	BLANK CASH-PAK LABEL THERMAL TRANSFER K ($1)	ROLL	1,300 LABELS	SC
5	BLANK CASH-PAK LABEL THERMAL TRANSFER L	ROLL	1,300 LABELS	DD
3	BLANK BUNDLE LABEL THERMAL TRANSFER M ($1)	ROLL	3,300 LABELS	OCD
4	BLANK BUNDLE LABEL THERMAL TRANSFER N	ROLL	3,300 LABELS	NCD
5, 7	BLANK CASH-PAK LABEL THERMAL TRANSFER O ($1)	ROLL	2,000 LABELS	SC
5, 7	BLANK CASH-PAK LABEL THERMAL TRANSFER P	ROLL	2,000 LABELS	DD
3	BLANK BUNDLE LABEL THERMAL TRANSFER Q ($2)	ROLL	3,300 LABELS	OCD
5, 7	BLANK CASH-PAK LABEL THERMAL TRANSFER R ($2)	ROLL	2,000 LABELS	SC
11	CFD - Blank Bundle Labels Thermal Transfer S	ROLL	3,300 LABELS	CCD
8, 9, 10	FRB Eagle Label (All denominations) T	ROLL	2,000 LABELS	NCD
N/A	Test Labels	ROLL	ROLL	TEST
N/A	Zebra film/ink Printer Cartridge (5.12" x 1476")	CASE	24/CASE	BB/BCP

Legend for Table 1

OCD - Old Currency Design	DD - Diagonal Dropout
NCD - New Currency Design	BB – Blank Bundle
BCP - Blank Cash-Pak	CCD – CFD Currency Design
PCP - Printed Cash-Pak	Test – Test Labels
SC - Solid Color	

Table 2 COLOR BLOCK FOR BUNDLE AND CASH-PAK

DENOMINATION	PANTONE^{R} COLOR
$1	297U BLUE (Cash-Pak only)
$2	347U GREEN
$5	182U RED
$10	107U YELLOW
$20	256U VIOLET
$50	467U BROWN
$100	459U GOLD

2.0 APPLICABLE DOCUMENTS. The issues of the documents are those in effect on the date of the solicitation.

2.1 Government Documents.

2.1.1 Specifications, Standards, and Handbooks.

Bureau of Engraving and Printing Specification

L: VAB-1 Specification for Vendor Affixed Bar Code Labels for Bureau of Engraving and Printing Materials.

(Single copies of BEP specifications are available from the Contracting Officer; Bureau of Engraving and Printing; Office of Acquisition; 14th and C Streets, SW; Washington, DC 20228.)

2.1.2 Other Government Documents, Drawing, and Publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein.

Bureau of Engraving and Printing Document:

75B-07.0-05 EHS Requirements for Purchased Materials

(Request for copies should be addressed to the Contracting Officer; Bureau of Engraving and Printing; Office of Acquisition; 14th and C Streets, SW; Washington, DC 20228.)

2.2 Non-Government Publications. The following documents form a part of this specification to the extent specified herein.

- **American National Standards Institute/American Society for Quality (ANSI/ASQ)**:
- **ANSI/ISO/ASQ Q9001-2015** Quality Management Systems - Requirements
- **ANSI/ASQ Z1.4** Sampling Procedures and Tables for Inspection by Attributes

(Requests for copies should be addressed to the American Society for Quality Control, 611 East Wisconsin Avenue, PO Box 3005, Milwaukee, Wisconsin 53202-3005).

- **American National Standards Institute**
- **MH10.8M** --American National Standard for Material Handling -- Bar Code Symbols on Unit Loads and Transport Packages
- **X3.182** --American National Standard for Information Systems -- Bar Code Print Quality Guideline

(Requests for copies should be addressed to the American National Standards Institute, Inc. (ANSI); 1430 Broadway; New York, New York 10018).

- **National Motor Freight Classification Rules and Container Specifications**

(Requests for copies should be addressed to the American Trucking Association, Inc.; 2200 Mill Street; Alexandria, Virginia 22314-4677).

- **Pantone Matching System® Color Formula Guide**

(Requests for copies should be addressed to Pantone LLC; 590 Commerce Boulevard; Carlstadt, New Jersey, 07027-3098, (Telephone 201-935-5500; FAX Number 201-896-0242).

- **Testing Methods of the Technical Association of the Pulp and Paper Industry (TAPPI):**
- **T 402 Standard Conditioning and Testing Atmosphere for Paper, Board, Pulp Hand sheets, and Related Products**
- **T 494 Tensile Breaking Properties of Paper and Paperboard**

(Requests for copies should be addressed to the Technical Association of the Pulp and Paper Industry; 15 Technology Parkway South, Norcross, Georgia 30092-2928. TAPPI testing methods are also available for purchase from the following website: www:tappi.org)

2.3 Order of Precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.4 Internal References. All paragraph and table references will be to paragraphs and tables of this specification, unless stated otherwise.

3.0 REQUIREMENTS

3.1 Material. The label stock on which the labels are printed shall be white. The labels shall be coated on one side with adhesive. Additional requirements of the paper for bundle and cash-pak labels are provided in the paragraphs to follow. The printing on the labels shall be black.

3.1.1 Adhesive. The label substrate shall be completely coated on one side with a permanent pressure sensitive adhesive that shall require no heat, moisture, or other preparation prior to application. The adhesive shall not discolor the labels. The adhesive shall not emit a strong, objectionable odor. The pressure-sensitive adhesive shall exhibit low initial tack to allow for ease of application and repositioning. Low initial tack provides minimal adhesion upon first contact, enabling the label to be removed or repositioned cleanly during placement. The adhesive shall progressively develop increased bond strength over time to ensure adequate long-term adhesion. Adhesives with high initial tack, which bond rapidly and firmly upon contact, are not preferred, as they significantly reduce or eliminate the ability to reposition the label once applied.

3.1.2 Label Release Liner. The release liner of the labels shall have a release coating sufficient to allow removal of labels from the liner by the automatic application equipment used in the BEP and to prevent accidental separation of the labels during unfolding or unrolling and feeding prior to application. The label release liner stock shall support the label during transport through BEP processing equipment without tearing or causing stoppages in the labeling process.

3.2 Performance. The labels shall be suitable for applying to shrink wrapped currency packages using BEP automatic label application equipment. The labels and liner shall unwind and transport through BEP label processing equipment without tearing, distortion, or premature release of the labels.

3.2.1 Bundle labels. Bundle labels shall be repositionable after application to the wrap film to allow for minor issues in applying the labels. The bundle labels shall be permanently attached to the bundle film within six hours after application and remain attached until the bundle film is removed

from the bundle. The print surface of the bundle label stock shall have an optical brightener that responds to an excitation wavelength of 365 nanometers.

3.2.2 Cash-Pak Labels. The Cash-Pak label face sheet shall be constructed from a 3.2 mil matte coated paper. The Cash-Pak labels shall be tamper-evident: show evidence of attempted removal or tampering. The printed Bar Code shall be machine readable and shall exhibit a Bar Code Print Quality symbol of grade C/10/630 or better as defined in ANSI X-3.182 – 1990, paragraph 5.3.1.2.

3.3 Label Substrate Opacity. The substrate on which the labels are printed shall meet the minimum opacity requirements of ANSI X3.182, paragraph 5.1.1.

3.4 Color. The paper color shall be white and shall permit ready identification of printed colors specific to each denomination printed onto the currency labels when required. The final determination as to "whiteness" of the paper shall be determined by the BEP. The BEP may specify a color code on the labels. The color shall be matched to the Pantone® colors referenced in Table 2.

3.5 Process Sets.

3.5.1 Process Set Description. Printed currency labels shall be delivered in numerically matched sets of bundle and Cash-Pak labels, referred to as a Process Set. A Process Number that will be designated by the BEP will identify each Process Set. The numbering algorithm for the labels is given in Section 6.3. The characteristics of Process Sets are given in Table 3.

Table 3 PROCESS SET DESCRIPTION

PROCESS NAME	APPLICATION	# OF NOTES IN FED. RES. PROCESS	# OF BUNDLE LABELS	# OF CASHPAK LABELS
100K PROCESS	100,000 SHEET CURRENCY FINISHING PROCESS	3,200,000 FEDERAL RESERVE NOTES	3,200 LABELS	200 LABELS
200K PROCESS	200,000 SHEET CURRENCY FINISHING PROCESS	6,400,000 FEDERAL RESERVE NOTES	6,400 LABELS	400 LABELS

3.6 Printed Labels

3.6.1 Printed Bundle Labels. The bundle labels shall be imprinted with two lines of "Code 39" Bar Code and English language human readable interpretation as specified in ANSI MH10.8M, Section 5, "American National Standard for Materials Handling - Bar Code Symbols on Unit Loads and Transport Packages".

The first line of the Bar Code represents the denomination and brick number. The first line of the human readable interpretation represents the bank, denomination, and brick number. The second line of the Bar Code and the human readable interpretation represent the note series and starting note serial number. The Process Set sequential number algorithm is given in Section 6.3.

The printed information layout for old currency design and new currency design bundle labels are specified in the attachments 1 and 2. The layouts for label dimensions, color block, and label position on the release liner are specified in the attachments 3 and 4. Beginning with the first bundle label in each Process Set, every fourth label shall be printed with an 8 by 3 mm (5/16 by 1/8 inch) horizontal black counting mark. The counting mark positions are given in attachments 1 and 4. The Process Set Number, the bank, series, and note denomination required for each Process Set will be provided by the BEP at the time of order.

Each Process Set should have 50 cm (20 inches) of leader at the beginning and 50 cm (20 inches) of trailer at the end. Printed bundle labels shall be delivered in rolls. The labels shall be supplied on 3-inch cores with the labels wound out. The labels shall unwind in ascending order with respect to the label number. The leading edge of the labels shall be as shown in attachments 1 and 2.

3.6.2 Printed Cash-Pak Labels. The Cash-Pak labels shall be imprinted with a six-character alphanumeric human readable Cash-Pak number, the bank name and note series, and the beginning serial number in the currency package. A line of "Code 39" Bar Code shall represent the beginning serial number. The sequential number algorithm and label information for each Process Set are given in Section 6.3. The printed Cash-Pak labels shall be supplied in rolls in continuous form without perforations to the release liner. The rolls shall be suitable for use with an automated type of label applicator system. The alphanumeric numbering sequence of the Cash-Pak serial numbers and label numbers shall be in decreasing order as they unwind off the roll. The printed information layout for Cash-Pak labels is specified in Attachment 6. The layout for label dimensions and label position on the release liner is specified in Attachment 5. The Cash-Pak rolls shall be printed in accordance with the Cash-Pak Label Unwind Direction (See Attachment 10).

3.7 Blank Labels.

3.7.1 Bundle Labels, Thermal Transfer, Unprinted. Bundle labels intended for thermal transfer printing shall be supplied on a liner having a minimum width of 124 mm (4-7/8 inches). Thermal transfer print blank labels shall be supplied with no counting marks. The labels shall be supplied in rolls in continuous form. The unprinted labels shall be supplied in bulk rolls of 3,300 blank labels. The layout dimensions shall be as specified in attachments 3 and 4 (delete counting marks).

3.7.2 Cash-Pak Labels, Thermal Transfer, Unprinted. Unprinted Cash-Pak labels intended for thermal transfer printing shall be supplied on a liner having a minimum width of 130 mm (5-1/8 inches). The labels shall be made from label stock suitable for thermal transfer printing. The unprinted labels shall be supplied in rolls in continuous form. Thermal transfer print Cash-Pak labels will be specified by the BEP at the time of order. The layout dimensions shall be as specified in attachment 5. Thermal transfer print Cash-Pak labels shall be supplied in bulk rolls of 1,300 labels.

3.7.3 Bundle Label Color Code. The BEP will specify bundle labels to be furnished either with or without color code. The colors should be a close visual match to colors specified in Section 1.2.3. Bundle labels requiring color coding shall have a color mark on the right-hand side of the label. The color mark shall be provided in the following two types. The color and the type will be specified by the BEP at the time of order.

3.7.3.1 Type One. The color mark shall be a square 19 ± 2 mm (3/4 ± 1/16 inch) on a side. (See attachment 3)

3.7.3.2 Type Two. The color mark shall be rectangle 10 by 20 ± 2 mm (3/8 by 3/4 ± 1/16 inch) on a side. **(**See Attachment 4)

3.8 Blank Bundle Labels. Blank bundle labels shall be supplied for thermal transfer printer as specified in section 3.7.1. The blank bundle labels shall be delivered in continuous form, with no breaks or splices in the labels.

3.9 Blank Cash-Pak labels. Blank Cash-Pak labels shall be supplied for thermal transfer printer as specified in section 3.7.2. The blank Cash-Pak labels shall be delivered in continuous form, with no breaks or splices in the labels.

3.10 Federal Reserve Bank Eagle Labels. The cut labels shall be 133.4mm by 127.4mm (5¼ inch by 5 inch) in size with a one-color imprint in green ink. The labels shall be supplied in rolls of 2,000 labels with 6.4mm (¼ inch) spacing between the labels. These labels shall be tamper proof and have permanent pressure sensitive adhesive on the back. The labels shall be a close visual match to the sample provided by the BEP. The rolls shall be printed in accordance with Roll Label Unwind Directions. (See attachments 8, 9, and 10)

3.11 Color Code. The dollar denomination shall be coded by means of a color block in both bundle and Cash-Pak labels. The color shall be a close visual match to the Pantone® colors specified in Section 3.4 and Table 3. The absence of a color block on bundle labels denotes one dollar denomination. The layout of the color blocks is shown in Attachments 3 and 4 for bundle labels and Attachment 5 for Cash-Pak labels.

3.12 Bundle Label Construction. The bundle labels shall be laid on a continuous liner with the long dimension of the labels across the web. The labels shall be centered on the liner, and there shall be a space of 3 mm ± 1 mm (1/8 ± 1/32 inch) between adjacent labels. The tolerance on label dimensions shall be ± 2 mm (± 5/64 inch).

3.12.1 OCD Bundle Label Dimensions. Old currency design (OCD) bundle labels shall be die-cut, 120.7 by 57.2 mm (4-3/4 by 2-1/4 inches), with a 57.2 by 8.6 mm (2-1/4 by 3/4 inch) section in the lower left-hand corner removed. All corners shall be radius cut. The color block shall be a square 8.6 mm ± 1.6 mm (3/4 ± 1/16 inch). (See Attachment 3).

3.12.2 NCD Bundle Label Dimensions. New currency design bundle labels shall be die-cut, 120.7 by 57.2 mm (4-3/4 by 2-1/4 inches), with a 47.6 by 8.6 mm (1-7/8 by 3/4 inch) section in the upper left-hand corner removed. All corners shall be radius cut. The color block shall be a rectangle of 9.5 mm by 8.6 mm ± 1.6 mm (3/8 by 3/4 ± 1/16 inch). (See Attachment 4).

3.12.4 CFD Bundle Label Dimensions. CFD bundle labels shall be die-cut, 120.7 by 57.2 mm (4-3/4 by 2-1/4 inches), with a 47.6 by 8.6 mm (1-7/8 by 3/4 inch) section in the lower left-hand corner removed. All corners shall be radius cut. The color block shall be a rectangle of 9.5 mm by 8.6 mm ± 1.6 mm (3/8 by 3/4 ± 1/16 inch). (See Attachment 11)

3.13 Cash-Pak Label Construction. The Cash-Pak labels shall be laid on a continuous liner with the long dimension of the labels across the web. The labels shall be centered on the liner, and a space of 3.2 mm ± 0.8 mm (1/8 ± 1/32 inch) between adjacent labels. The tolerance on label dimensions shall be ± 2 mm (± 5/64 inch). The Cash-Pak labels shall be die-cut, 127 mm wide by 120.7 mm high (5 by 4 3/4 inches). (See Attachment 5). All corners shall be radius cut. The tolerance on label dimensions and liner width shall be ± 2 mm (± 5/64 inch).

3.14 Roll Cores. When labels are furnished in roll form, the paperboard core of the roll shall have a minimum inside diameter of 76.2 mm (3 inch) with a tolerance of ± 2 mm (5/64 inch). The width of the core shall be the width of the roll ± 2 mm (5/64 inch).

3.15 Print Quality. The ink on the printed labels shall not smudge or smear during handling of the labels or labeled packages. The human readable interpretation shall be clear and legible. The printed Bar Code shall be machine readable and shall exhibit a Bar Code Print Quality symbol grade of C/10/630 or better as defined in ANSI X-3.1821990, paragraph 5.3.1.2.

3.16 Workmanship. The label edges shall be cleanly cut, and the print surface shall be free of adhesive. The liner edges shall be cleanly slit. The liner shall be free from die cuts, slits, and wrinkles that may cause breaks or feeding problems. There shall be no labels missing, wrinkled, folded, or blocked to an adjoining layer.

3.17 Adhesion and Storage Stability. The adhesion of Cash-Pak & Currency bundle labels after application using BEP equipment shall be sufficient to cause fiber tears, distortion of the label, or other visual evidence upon attempted removal from a shrink film wrapped currency package after application; labels shall adhere until the film is removed but should be repositionable without mutilation within one hour of application.

3.18 Environmental, Health and Safety Requirements. The contractor shall comply with the requirements of 75B-07.0-05, EHS Requirements for Purchased Materials.

4.0 QUALITY ASSURANCE PROVISIONS.

4.1 Contractor Quality Assurance Document. The BEP shall rely on the contractor's existing quality assurance system. The quality assurance system shall address the requirements of ANSI/ISO/ASQ Q9001-2015. The BEP reserves the right to perform any inspections and tests that the BEP deems necessary upon receipt of the material to assure conformance to requirements. The BEP may conduct periodic site visits and quality audits of the facilities of the manufacturer or major first-tier subcontractors in cases where the contractor is a "broker" or "regular dealer." Upon request by the BEP, the contractor shall provide a copy of their current quality assurance system document, to the BEP. If the contractor is a "broker" or a "regular dealer" and not the manufacturer of supplies to be delivered under the terms of the contract, the BEP may request that the contractor provide a copy of the current quality assurance system document of its major first-tier subcontractors. The quality assurance system document will be used by the BEP as the basis for conducting the quality audit.

4.2 Inspection and Testing.

4.2.1 Responsibility for Inspection and Testing. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection and testing requirements as specified. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to BEP. The BEP reserves the right to perform any of the inspections and tests set forth in the specification. This will include periodic quality audits of the contractors and subcontractors.

4.2.2 Performance. The BEP will evaluate the labels on BEP production equipment for compliance with the requirements specified in Sections 3.1.2 and 3.2. Adhesion will be evaluated immediately after application and at the intervals specified in 3.2.1.

4.2.3 Sampling. Sampling for inspection and testing shall be conducted in accordance with ANSI/ASQ Z1.4. When sampling for Bar Code and Human Readable Characters, the lots shall be expressed in units of "labels". When sampling for Defects in Appearance and Workmanship and for Defects in Preparation and Delivery, the lots shall be expressed in units of Process Sets. The number of either Process Sets or labels selected as samples for inspection and testing shall be determined in accordance with Table I and Table II-A. Both Cash-Pak and bundle labels shall be sampled. Because preprinted labels are in sequence, labels shall not be removed from sequence for testing. Tests requiring removal of labels for testing shall be done on labels which are not part of a Process Set prepared for delivery to the BEP. No error of numbering accuracy shall be considered acceptable. Inspection Levels (IL) and Acceptable Quality Levels (AQL) shall be as follows (Table 4):

TABLE 4

SAMPLING FOR INSPECTION AND TESTING

DESCRIPTION	INSPECTION LEVEL	ACCEPTABLE QUALITY LEVEL
Bar Code and Human Readable Characters	III	0.025
Defects in Appearance and Workmanship	II	1.5
Defects in Preparation and Delivery	II	1.5

4.3 Testing. Tests shall be conducted in accordance with the following methods. Reference to specific instruments is for information only; use of a company or product name in this document does not imply approval or recommendation of the product in preference to others that may also be suitable. The BEP will work with the contractor to establish correlations between various instruments when required.

4.3.1 Test Conditions. The label samples shall be conditioned and tested under environmental conditions that meet the requirements of T 402.

4.4 Print Quality

4.4.1 Bar Code. The print quality of the Bar Code shall be evaluated in accordance with ANSI X3.182.

4.4.2 Human Readable. The human readable portion of the labels shall be the visual equivalent of the Bar Code quality in Section 4.4.1.

4.5 Inspection. The following inspections shall be conducted for the requirements listed below by paragraph, in accordance with the methods given (Table 5).

TABLE 5 INSPECTION

PARAGRAPH / REQUIREMENTS	INSPECTION METHOD
3.2.2 / Tamper Evidence	Visual, manual examination
3.4 / Color	Visual examination
3.12 , 3.13 / Construction; label construction, label dimensions; liner width; label position on liner	Visual and manual examination, measurement
3.15 / Printing and Print Quality	Visual, manual evaluation, measurements, Bar Code examination

Counting mark dimension (bundle only), position of information; sequencing; and accuracy of information; readability of Bar Code, agreement of Bar Code with human readable information	
3.16 / Workmanship; labels cleanly cut, surface adhesive free, liner edges cleanly slit; liner free from die cuts, slits, wrinkles	Visual examination

4.6 Contractor Certification. The contractor shall provide the following documentation on the labels supplied.

4.6.1 Certifications and Reports. The contractor shall certify in writing that the labels supplied in each delivery meet all of the requirements including health, safety and environmental as set forth in this specification. The signed and dated certification shall include a statement of the recovered content if any. This certificate of compliance shall accompany the report of inspections and tests. The contractor shall furnish copies of the results of the inspections and test results performed on each lot of labels supplied to the BEP. The contractor shall certify the readability of Bar Codes on Cash-Pak and bundle labels.

5.0 PREPARATION FOR DELIVERY

5.1 Packaging. The packaging shall conform to the Department of Transportation Rules, and to the applicable requirements of the National Motor Freight Classification Rules and Container Specifications.

5.1.1 Packing. Labels shall be packed in rolls in continuous form with no breaks in the web. For each Process Number specified by the BEP, the currency bundle and Cash-Pak label set of that Process shall be packaged separately in individual cartons. The carton shall be constructed to prevent movement or damage to the labels during shipping, handling, and storage. The labels shall be delivered undamaged. The carton dimensions shall be no wider than 381mm (15 inches), no deeper than 381mm (15 inches), and no higher than 305mm (12 inches).

5.2 Marking

5.2.1 Individual Cartons, Printed Labels. Each carton shall be marked as "**CURRENCY BUNDLE AND CASH-PAK LABELS".** Each carton shall be plainly marked with the Process Number; Bank Identification; Currency Denomination and Series; Note serial number from the first bundle label; Prefix and Suffix letters; Manufacturer's name; and the BEP Purchase Order Number.

5.2.2 Individual Cartons, Blank Labels. Each carton shall be marked as **"CURRENCY BUNDLE LABELS" or "CASH-PAK LABELS".** Each carton shall be plainly marked with Currency Denomination; Manufacturer's Name; and the BEP Purchase Order Number.

5.2.3 Individual Cartons, FRB Eagle Labels. Each carton shall be marked as "**FRB EAGLE LABELS"** or identified with an affixed sample of the eagle label; BEP Stock item numbers, 1L001960, 1L001961, or 1L001962; Contractor's Name; Number of Labels; and the BEP purchase order number.

5.2.4 Pallet Marking, FRB Eagle Labels. Each pallet load shall be legibly marked on two opposite sides with **"FRB Eagle Labels"** (or an affixed sample of the label); Contract Number; BEP Stock item numbers (1L001960, 1L001961, or 1L001962); Total number of labels; Contractor's Name; and the BEP Purchase Order Number.

6. NOTES. This section contains information of a general or explanatory nature that may be helpful, but not mandatory.

6.1 BEP Production Units. For accountability and security requirements, BEP requires precisely numbered label sets for each production run. A finished currency production run includes labels that are in numerically matched sets of bundle and Cash-Pak labels. It is most frequently called a Process. A Process Number is assigned by the BEP for each Process. At the discretion of the BEP, a Process may comprise a currency finishing production run of either 100,000 sheets (3,200,000 Federal Reserve Notes [FRN]), which is called a 100K Process or a currency finishing production run of 200,000 sheets (6,400,000 FRN), which is called a 200K Process. Each set of bundle and Cash-Pak labels must be identified by its Process Number and is referred to as a Process Set in this specification.

6.2 BEP Label Application & Printing Equipment. It is the responsibility of the contractor to ensure that any labels supplied to the BEP are compatible with the BEP's labeling and printing equipment.

6.3 Label Layout Diagrams and Numbering Algorithm. Layout diagrams and the numbering algorithm that are required by this specification are as follows:

6.3.1 Numbering Algorithm for Currency Labels. The final processing of printed currency into packages of sequenced serial numbered notes is accomplished in a production run called a Process. The BEP utilizes both a 200K Process consisting of 200,000 sheets of 32 subject notes (6,400,000 notes total) and a 100K Process consisting of 100,000 sheets of 32 subject notes (3,200,000 notes total).

Currency is packaged into labeled bundles of 1,000 notes. Four bundles are packaged into numbered bricks. These bricks receive no further labeling (the brick number is included in the bundle label information). Finally, four bricks are packaged into CASH-PAKS that contain 16,000 sequentially numbered notes. The Cash-Pak label includes the lowest serial number in the Cash-Pak. Thus, a 200K Process label set will include 6,400 bundle and 400 Cash-Pak labels while a 100K Process label set will include 3,200 bundle and 200 Cash-Pak labels.

The BEP numbering blocks have a maximum capacity of 8 digits for a total count of 99,999,999. This allows for a maximum of 15 numbered Process Sets of 6,400,000 notes for 200K sheet processes or 31 numbered Process Sets of 3,200,000 notes for 100K processes before the numbers are depleted. When the available numbers are exhausted, the suffix to the serial number is raised to the next letter and numbering begins again at note number 00,000,001.

The Process Number identifies each Process. This process number is used to compute the starting serial number of each process label set. The remaining serial numbers are generated in the required labeling sequence from the starting serial number by use of the algorithm supplied by the BEP. The 200K Processes and the 100K processes require somewhat different algorithms. The algorithms for generating the required label information are given in the following charts. These algorithms can be easily programmed to generate any of the required processes.

6.3.2 200,000 SHEET PROCESS SEQUENCE FOR BUNDLE AND BRICK LABELS

(1) To obtain the starting serial number for each Process Set, multiply the Process Number by 6,400,000 and subtract 3,300,999 from the product.

Starting serial number = [(Process #) (6,400,000)] - 3,300,999

(2) After the first column the beginning serial number of each new sequence is found by adding 199,000 to last serial number in the previous sequence.

(3) To obtain the brick number, divide the serial number by 4000 and round off the product to the next highest integer.

200K PROCESS
CASH-PAK SERIAL NUMBERS AND CASH-PAK LABEL NUMBERS

Cash-Pak label information includes the lowest serial number in the Cash-Pak and the Cash-Pak number. There are 400 Cash-Pak in a 200K Process. They are numbered sequentially from the lowest to the highest. Divide the beginning Cash-Pak number by the lowest serial number in the Process by 16,000, add 1, and round off to the nearest integer.

To obtain the lowest serial number of any 200K Process, multiply the Process Number by 6,400,000 and subtract 6,399,999 from the product. The sequence for Cash-Pak label serial numbers begins with the lowest serial number and increases by intervals of 16,000 for a total of 400 labels. (Note; The agreement of any Cash-Pak label number and serial number can be verified by dividing the serial number by 16,000 and adding 1). (Table 6)

TABLE 6 200,000 SHEET PROCESS SEQUENCE FOR BUNDLE AND BRICK LABELS

Label #	Serial #	Brick #
1	Starting Serial # (1)	Serial # 4000, rounded off to the next highest integer
2	+400,000	
3	-300,000	
4	+400,000	
5	-300,000	
6	+400,000	
7	-300,000	
8	+400,000	
9	+200,000	
10	+400,000	
11	-300,000	
12	+400,000	
13	-300,000	
14	+400,000	
15	-300,000	
16	+400,000	
17	-6,200,000	
18	+400,000	
19	-300,000	
20	+400,000	
21	-300,000	
22	+400,000	
23	-300,000	
24	+400,000	
25	+200,000	
26	+400,000	
27	-300,000	
28	+400,000	
29	-300,000	
30	+400,000	
31	-300,000	
32	+400,000	
33	+199,000 (2)	Serial # (3) 4000, rounded off to the next highest integer
34	+400,000	
35	-300,000	
36	+400,000	
Repeat Steps 2 thru 32, continue for a total of 200 columns (6,400 bundle labels)		

6.3.3 100,000 SHEET PROCESS SEQUENCE FOR BUNDLE AND BRICK LABELS

(1) The starting serial number for each Process Set is found by multiplying the Process Number by 3,200,000 and subtracting 1,500,999 from the product.

Starting serial number = [(Process #) (3,200,000)] - 1,500,999

(2) After the first column the beginning serial number of each new sequence is found by adding 99,000 to last serial number in the previous sequence.

(3) The brick number is found by dividing the serial number by 4000 and rounding off the product to the next highest integer.

100K PROCESS
CASH-PAK SERIAL NUMBERS AND CASH-PAK LABEL NUMBERS

Cash-Pak label information includes the lowest serial number in the Cash-Pak and the Cash-Pak number. There are 200 Cash-Pak in a 100K Process. They are numbered sequentially from the lowest to the highest. The beginning Cash-Pak number is found by dividing the lowest serial number in the Process by 16,000, adding 1, and rounding off to the nearest integer.

The lowest serial number of any 100K Process can be found by multiplying the Process Number by 3,200,000 and subtracting 3,199,999 from the product. The sequence for Cash-Pak label serial numbers begins with the lowest serial number and increases by intervals of 16,000 for a total of 200 labels. (Note; The agreement of any Cash-Pak label number and serial number can be verified by dividing the serial number by 16,000 and adding 1). (Table 7)

TABLE 7. 100,000 SHEET PROCESS SEQUENCE FOR BUNDLE AND BRICK LABELS

Label #	Serial #	Brick #
1	Starting Serial # (1)	Serial # 4000, rounded off to the next highest integer
2	+400,000	
3	-300,000	
4	+400,000	
5	-300,000	
6	+400,000	
7	-300,000	
8	+400,000	
9	+100,000	
10	+400,000	

11	-300,000	
12	+400,000	
13	-300,000	
14	+400,000	
15	-300,000	
16	+400,000	
17	-3,100,000	
18	+400,000	
19	-300,000	
20	+400,000	
21	-300,000	
22	+400,000	
23	-300,000	
24	+400,000	
25	+100,000	
26	+400,000	
27	-300,000	
28	+400,000	
29	-300,000	
30	+400,000	
31	-300,000	
32	+400,000	
33	+99,000 (2)	Serial # (3) 4000, rounded off to the next highest integer
34	+400,000	
35	-300,000	
36	+400,000	
Repeat Steps 2 thru 32, continue for a total of 100 columns (3,200 bundle labels)		

6.4 Definitions. Certain words and phrases are frequently used in this specification. The following rules will apply:

6.4.1 "Shall", the emphatic form of the verb, is used whenever a requirement is intended to express a provision that is binding.

6.4.2 "Will", is intended to express a declaration of purpose on the part of the Government. It may also be used to indicate simple futurity.

6.4.3 "Should" is used whenever a non-mandatory requirement is judged to be the best characteristic for the material or product. As such, this requirement will be graded during the evaluation of the material in order to assist in the selection of the best qualified material.

ATTACHMENTS:

Attachment 1- Bundle Label Printing, Old Currency Design
Attachment 2- Bundle Label Printing, New Currency Design
Attachment 3- Blank Bundle Label Layout, Old Currency Design
Attachment 4- Blank Bundle Label Layout, New Currency Design
Attachment 5- Unprinted Cash-Pak Label Layout, Thermal Transfer Printer
Attachment 6- Printed Cash-Pak Labels
Attachment 7- Cash-Pak Roll Label Unwind Direction
Attachment 8- Roll Label Unwind Directions
Attachment 9- Federal Reserve Eagle Label
Attachment 10- Roll Label Unwind Directions – LEPE
Attachment 11- Blank Bundle Label Layout CFD Design

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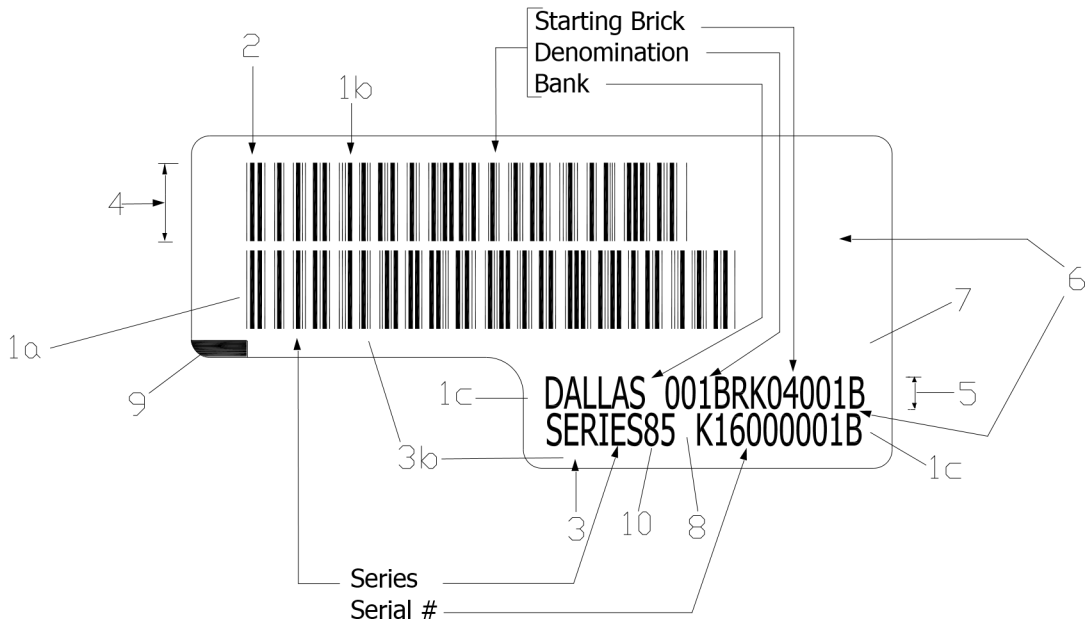
Attachment 1

BUNDLE LABEL PRINTING Old Currency Design

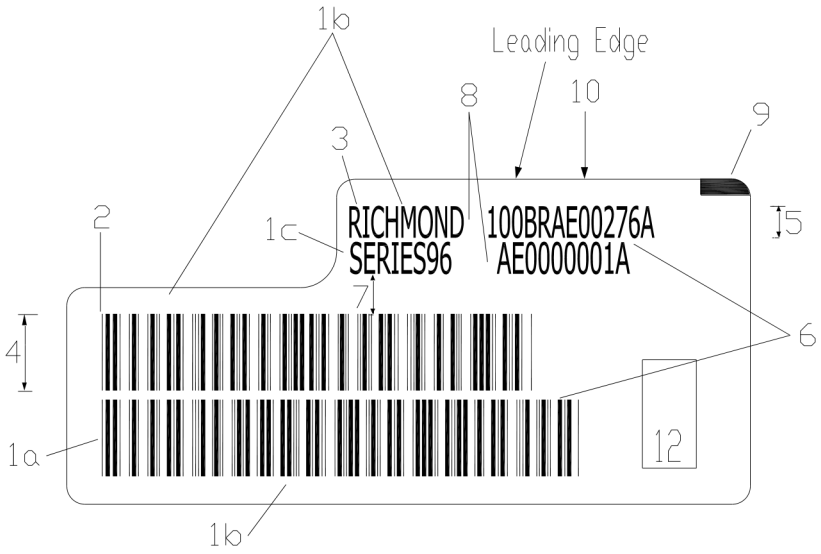


Attachment 1 KEY:

1) Margins
   a. Left Margin: 8 + 1.6 mm (5/16 + 1/16 inch)
   b. Upper and Lower Margins: 5 mm (3/16 inch) minimum
   c. Left and Right Margins of Human Readable Information: 3 mm (3/32 inch) minimum
2) Bar Codes left justified
3) Human readable information left justified in lower right section of the label
4) Bar Codes 13 + 1 mm (1/2 + 1/32 inch) high
5) Human readable information 5 + 1 mm (3/16 + 1/32 inch) high
6) Distance between lines 1 and 2, 3 and 4: 1 mm (1/32 inch) minimum
7) Distance between lines 2 and 3: 3 mm (1/8 inch) minimum
8) Two character spaces required, except when the space adjacent to the series is occupied by a single letter suffix
9) Counting Mark (every fourth label)
10) One character space required
11) Printed information on label
   a. The series is assigned a single letter suffix.
   b. The serial number is eight digits plus prefix and suffix letters, denoting the serial number of the top note. Leading zeros must be included.
   c. The brick number is five digits, plus prefix and suffix. Leading zeros must be included.
   d. The maximum length of the vabj name is nine characters.
   e. The brick indication letters “BR” shall always be included between the denomination and brick number.
   f. The bank name is not included in the top line of Bar Code data. The bank name is indicated by the serial number prefix in the second line of Bar Code data.
   g. The word “series” is not included in the Bar Code data.

Attachment 2

BUNDLE LABEL PRINTING New Currency Design



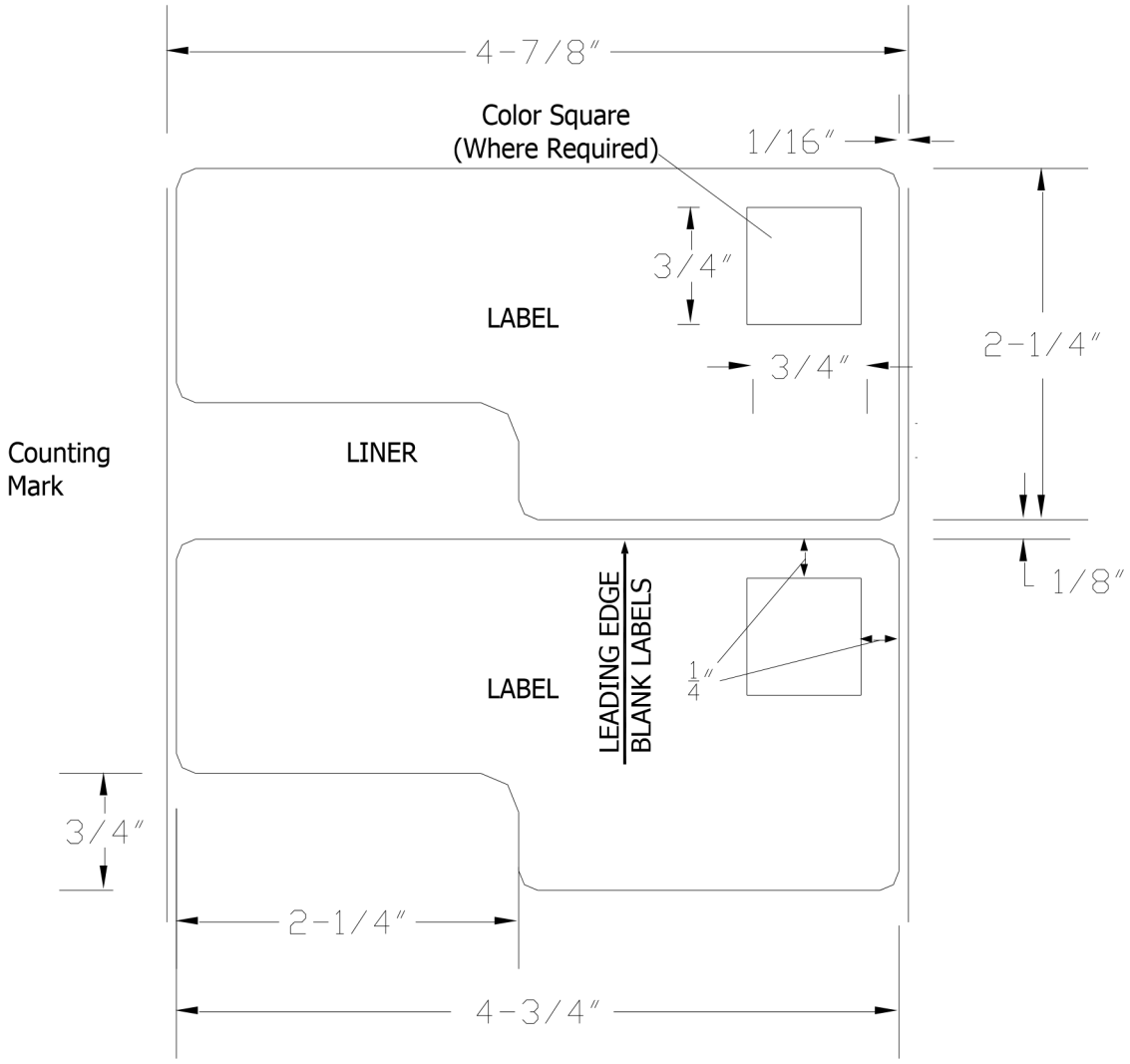
Attachment 2 KEY:

1) Margins
    a. Left Margin: 5± 2 mm (3/16 ± 1/16 inch).
    b. Upper and Lower Margins: 5 mm (3/16 inch) minimum.
    c. Left Margin of Human Readable Information, 3 mm (3/32 inch) minimum.
    d. Right Margin of Human Readable. 10 mm (3/8 inch) minimum.
2) Bar Codes left justified.
3) Human readable information left justified in upper right section of the label.
4) Bar Codes 13 ± 1 mm (1/2 ± 1/32 inch) high.
5) Human readable information 5 ± 1 mm (3/16 ± 1/32 inch) high.
6) Distance between lines 1 and 2, 3 and 4: 1 mm (1/32 inch) minimum.
7) Distance between lines 2 and 3: 3 mm (1/8 inch) minimum.
8) Space.
9) Counting Mark (every fourth label beginning with first label)
10) Leading edge of label.
11) Printed information on label:
    a. The serial number is preceded by a double letter prefix. The first letter is the series and the second letter denotes the bank name.
    b. The serial number is eight digits plus prefix and suffix letters, denoting the serial number of the top note. Leading zeros must be included.
    c. The brick number is five digits, plus prefix and suffix. Leading zeros must be included. The double letter prefix is the same as that of the section (a) above.
    d. The maximum length of the bank name is nine characters.
    e. The brick indication letters “BR” shall always be included between the denomination and brick number.
    f. The bank name is not included in the top line of Bar Code data. The bank name is indicated by the serial number prefix in the second line of the Bar Code data.
    g. The word “series” is not included in the Bar Code data.

12) Color Mark

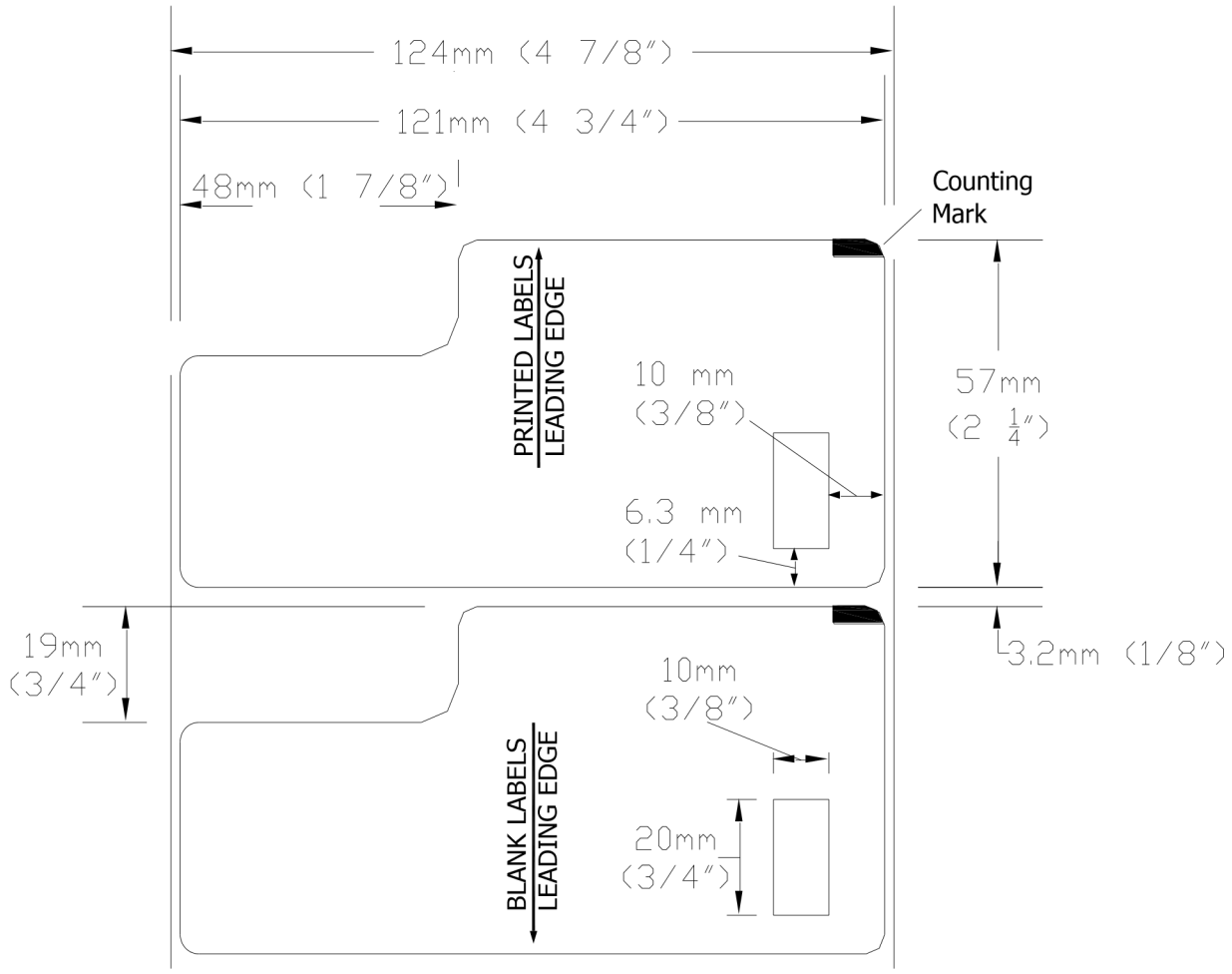
Attachment 3

BLANK BUNDLE LABEL LAYOUT Old Currency Design



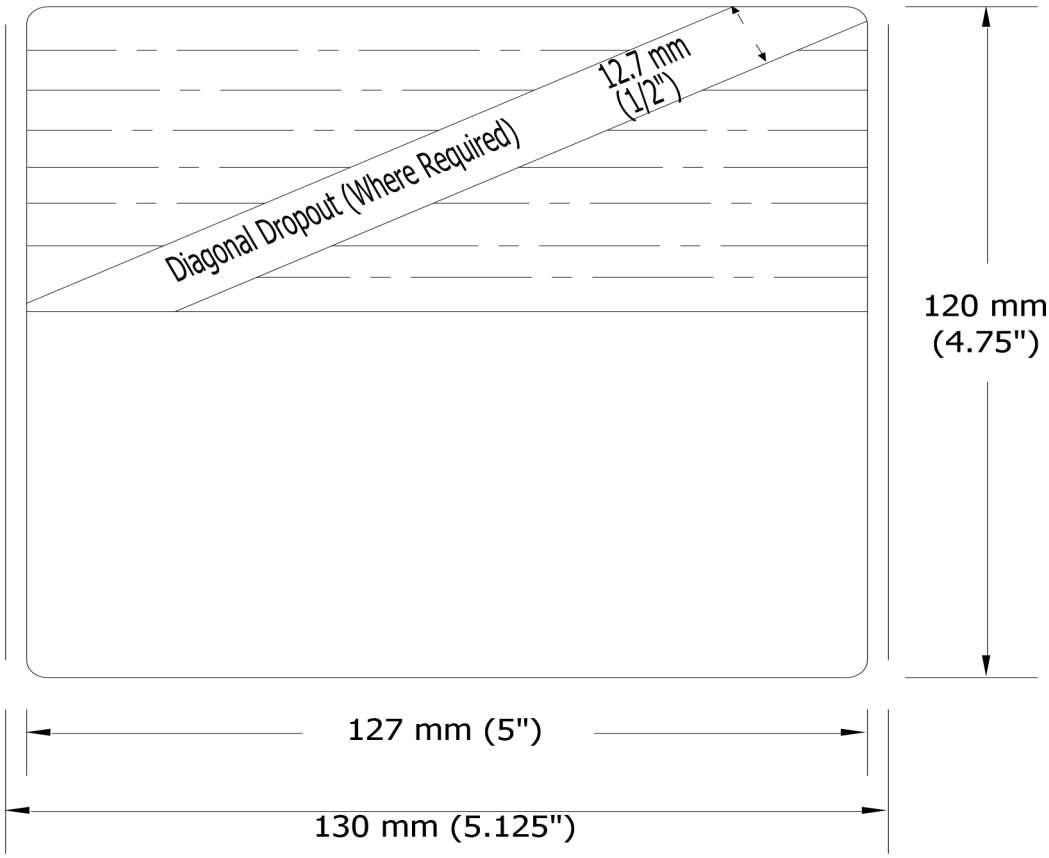
Attachment 4

BLANK BUNDLE LABEL LAYOUT New Currency Design



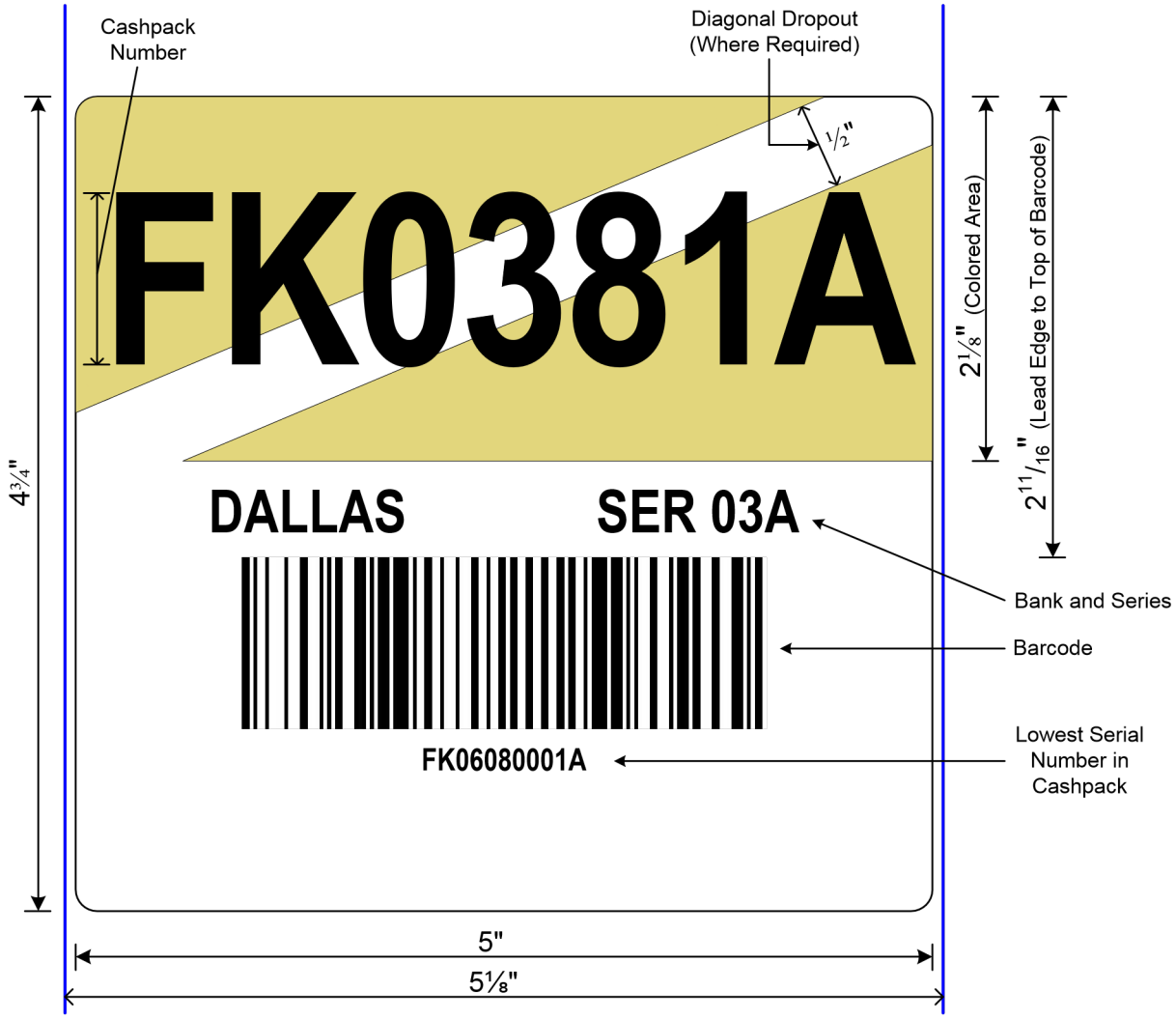
Attachment 5

UNPRINTED CASH-PAK LABEL LAYOUT Thermal Transfer Printer



Attachment 6

PRINTED CASH-PAK LABELS



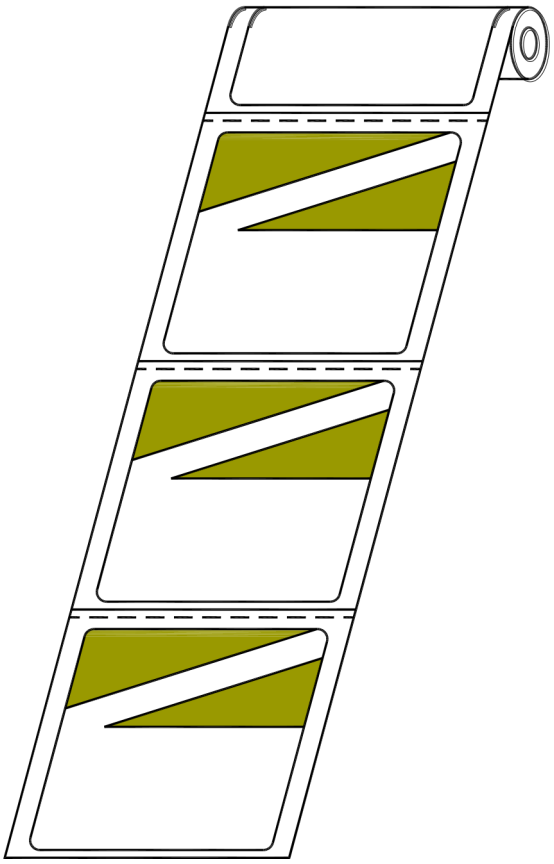
1) Cashpack Number: Height 1" ± 1/32"
2) Bank and Series: Height 1/4" ± 1/32"
3) Bar Code: Height 1" ± 1/32"
4) Lowest Serial Number in Cash-Pak: Height 1/8" ± 1/32"
5) Bank and Series, Bar Code, and Lowest Serial Number in Cash-Pak centered horizontally on label.
6) Cash-Pak Number centered vertically in the colored area.
7) Bank and Series centered between bottom of colored area and top of Bar Code.

Attachment 7

CASH-PAK ROLL AND LABEL UNWIND DIRECTION

COPE-PAK
LEPE

Note Packaging

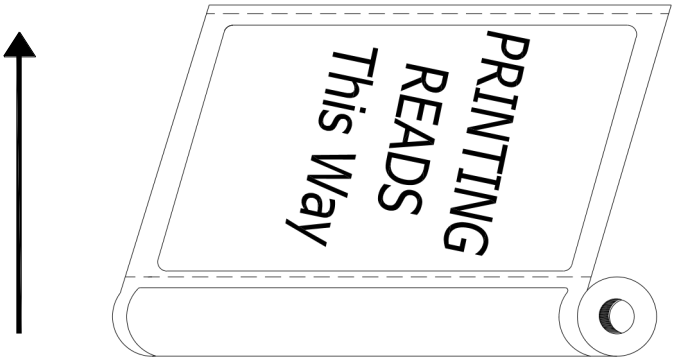


Attachment 8

ROLL LABEL UNWIND DIRECTIONS

Drawing #1
BEP Stock Item
#1L001960

Drawing #2
BEP Stock Item #1L001961



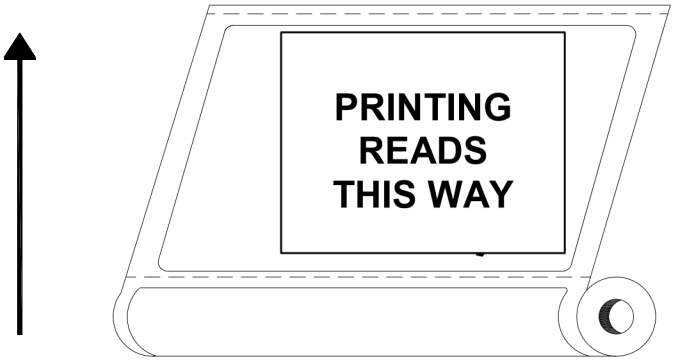
Attachment 9

FEDERAL RESERVE EAGLE LABEL

Attachment 10

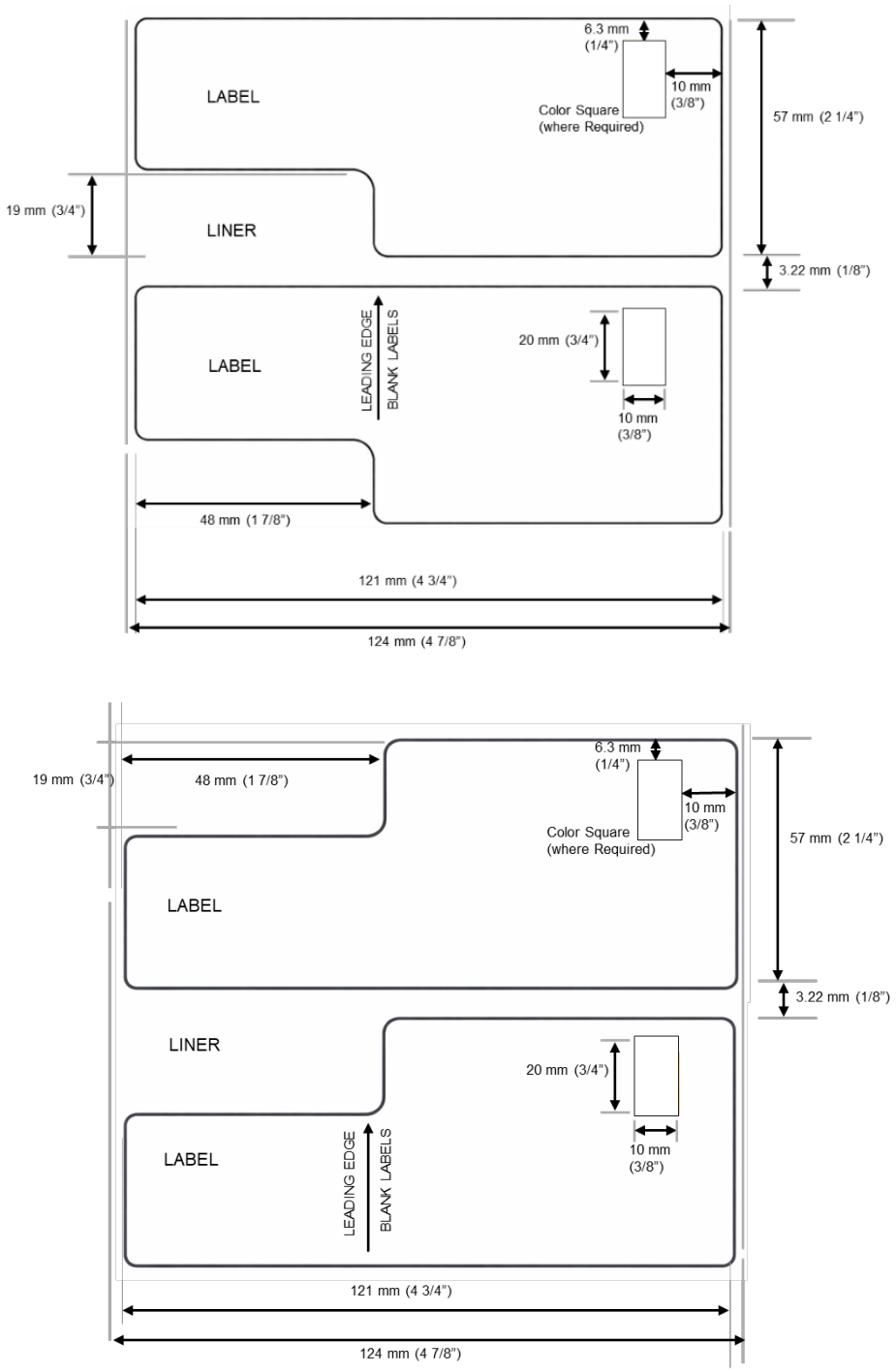
ROLL LABEL UNWIND DIRECTIONS - LEPE

Drawing #3
BEP Stock Item #1L001962



Attachment 11

BLANK BUNDLE LABEL LAYOUT CFD CURRENCY DESIGN



Revisions

Date	Revision #	Change Section & Description
8NOV2021	L: PCS-7	Initial: Supersedes L: PSC-6 October 29, 2015