

Parcel Labeling Guide

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1. Introduction

1.1. Purpose

This document has been developed to simplify current technical guidance on the content and layout of labels on parcels shipped via the United States Postal Service[®] (USPS[®]).

While some flexibility exists in design of shipping labels, adherence to the standards provided in this document will facilitate label certification and insure the most efficient processing of your parcels.

1.2. Scope

This document will focus primarily on the layout and content of domestic shipping labels and will cover the following topics:

- Specifications for specific label elements
- Examples of layout and content for labels
- Applicable parcel barcode standards.

1.3. Audience

This document is designed for use by any party interested in creating or understanding USPS parcel labeling requirements. This can include:

- Third-party vendors developing shipping applications
- Customers including USPS shipping capabilities in their custom shipping systems
- Integrators or Value Added Resellers (VARs) producing shipping labels
- USPS employees involved in label production, label processing, or assisting thirdparties in label development

1.4. The Domestic Mail Manual

The Mailing Standards of the United States Postal Service Domestic Mail Manual (DMM[®]) is the official source for all mailing standards described in this document. The information in this guide is meant to clarify and enhance the information in the DMM, but does not supersede it. Please refer to the DMM for official guidance on mailing standards and for any specific service, endorsement, or program requirements.



Figure 1 USPS Label Example

- 1. Service Icon Block
- 2. Service Banner
- 3. Postage Payment
- 4. Return Address
- 5. Endorsements
- 6. Delivery Address
- 7. Barcode Segment
- 8. Additional Information and User Segment

2. Label Design Elements

2.1. General Design Considerations – Color and Font

All USPS labels should be in black and white with the exception of the user section which may include color if desired. Fonts must be sans serif (e.g.: Arial, Helvetica or Verdana) and should be of Optical Character Recognition (OCR) quality.

Specific font and type sizes are listed throughout this guide. However, label designers should be aware that font appearance (and dimensions) may vary significantly from printer to printer and that different fonts may produce characters of different heights. For clarification, the reader is directed to information on font usage and definition included in appendix C.

2.2. The Payment and Branding Segment

The payment and branding segment of a USPS label consists of three sections: the service icon block, the service banner, and the postage payment section.



Figure 2: Payment and Branding Segment

2.2.1. Service Icon Block **1**

The service icon block, if used, should appear in the upper left hand corner of the shipping label. The service icon block is optional but when used must be used in conjunction with the service banner.

- The service icon block is a 1-inch block.
- Letters inside the block must be 3/4 inch or greater.
- A minimum 3/4 point must border the 1-inch square.
- There should be a minimum 1/16 inch space between the letter and the border.

Valid entries include:

- P = Priority Mail[®]
- F = First-Class™
- E = Express Mail[®]
- G = Parcel Select[®] Regional Ground
- A solid box = Package Services and Parcel Select (except Parcel Select Regional Ground)



Figure 3: Service Icon Blocks

2.2.2. Service Banner **2**

The service banner, if used, must appear directly below the postage payment and the service icon block. The service banner is optional but when used must be used in conjunction with the service icon block. The service banner meets DMM requirements for identification of mail subclass markings below the permit imprint and may eliminate the need for inclusion of the mail subclass within the permit imprint itself.

- The service banner must extend across the entire shipping label.
- The service banner must be bordered above and below by minimum 1-point separator lines.
- There must be a 1/16-inch clearance between the service banner text and the borders.
- Text within the service banner must be printed in a minimum 20-point bold sans serif font.
- Text within the service banner must be in uppercase letters.
- Text within the service banner must be centered within the banner.
- Text with the service banner should include the appropriate subclass marking (e.g.: PARCEL POST, MEDIA MAIL) preceded by the text "USPS."
- Trademark and registered trademark symbols are optional.

USPS PRIORITY MAIL®

USPS EXPRESS MAIL

Figure 4: Service Banner examples (with and without the trademarks)

2.2.3. Postage Payment 6

Evidence of postage payment should appear in the upper right hand corner of the label. Postage Payment may consist of any of the following:

- Stamps
- Metered Postage
- PC Postage
- Permit Imprint

Stamps, metered postage, and PC Postage are proprietary formats of USPS or its approved meter and PC Postage vendors and are not further elaborated in this document.

The standards for permit imprint indicia are outlined in section 604 of the Domestic Mail Manual and are summarized below.

- The indicia must be oriented in the same direction as the address.
- All text should be in uppercase and should contain the following information:
 - The class of mail (and if applicable automation or sort) as defined in the DMM.
 - o The text "U.S. POSTAGE PAID" or "U.S. POSTAGE AND FEES PAID."

- The city and state of the permit, except when used with the Electronic Verification System (eVS[®]) as described below.
- The text "PERMIT NO." followed by the permit number, except when used with eVS as described below.

Though not required, the following formatting suggestions are additionally recommended:

- The indicia should be no less than 1/2 inch in height.
- A minimum 3/4 point line should border the entire indicia.
- A clear space of 3/8 inch should surround the entire indicia.

The following additional markings are required for specific classes of mail when applicable:

- Priority Mail cubic parcels must bear the price marking "Cubic" or "CUBIC" directly above, below, or to the left of the indicia. Cubic Soft Pack must additionally include the package length, width and cubic tier size.
- First-Class Commercial Plus must bear the additional marking CommercialPlusPrice or ComPlsPrice.
- Parcel Select Regional Ground must bear a marking indicating the entry point of ONDC or OSCF.

For eVS mailings, a "company permit" is preferred. Company permits replace the permit number, city and state with an approved company name which is provided as part of the eVS application process. Additionally, eVS mailings require the marking eVS or e-VS as the last line of the permit imprint. Refer to the eVS[®] Business & Technical Guide, Publication 205, for more information on eVS permit imprint requirements.



Figure 5: Permit imprint examples

2.3. The Address and Delivery Information Segment

The address and delivery information segment consists of the return address, any endorsements and the delivery address.



Specific rules for address formatting can be found in the DMM section 602, Basic Standards for All Mailing Services – Addressing. Additional information on address formatting can be found in appendix B.

2.3.1. Return Address Section 4

A return address should conform to the following rules:

- The return address should be placed between 1/16 and 1/4 inch from the left edge of the label.
- The return address should be printed in an 8-point or greater sans serif font resulting in characters of 3/32 inch (baseline to capsline) or greater. For more information on font selection please refer to appendix C.
- The return address should be printed in uppercase letters.
- All lines of the return address should be left justified and evenly spaced.

2.3.2. Endorsement Section 6

Endorsements are used to provide delivery instructions, carrier release, or to request ancillary services.

Placement of the endorsement is dependent on the type of endorsement and is determined as follows.

- 1. The carrier release endorsement must be placed directly below the return address. If any other endorsement is used, the carrier release endorsement must be separated by the equivalent of one blank line of the type size used.
- 2. A retention period specified by the mailer must be placed directly above the return address.
- 3. Any ancillary service endorsement must be placed in one of these four positions:
 - a. Directly below the return address.
 - b. Directly above the delivery address area (which includes the delivery address block and any related non-address elements such as a barcode, keyline, or optional endorsement line).
 - c. Directly to the left of the postage area and below or to the left of any price marking.
 - d. Directly below the postage area and below any price marking.

When used, endorsements must conform to the following rules:

- Endorsements must be printed in a minimum of an 8-point sans serif font resulting in characters of 3/32 inch (baseline to capsline) or greater. For more information on font selection please refer to appendix C.
- Endorsements should be printed in upper case letters.
- Endorsements must have a clear space of at least 1/4 inch above, below, and to either side.
- Endorsements must be oriented in the same direction as the return address and delivery address

2.3.3. Delivery Address Section 6

The delivery address should be located on the label according to the following rules:

- The delivery address should be printed at least 1/2 inch from the left edge of the label and indented at least 1/4 inch from the left margin of the return address and any endorsements.
- The delivery address should be printed using a 10-point or greater sans serif font in upper case letters resulting in characters of 1/8 inch (baseline to capsline) or greater.
- All lines of the delivery address should be left justified and evenly spaced.

Address indicator marks may be used to further delineate the delivery address. Address indicator marks are optional but when included assist in identifying delivery address information to USPS OCR equipment.

- If used, address indicator marks should be in either angle iron or solid square formats.
- Angle iron address indicators should be 1/8 to 1/4 inch in width and 1/32 to 1/16 inch in depth.
- Solid square address indicators should be 3/32 to 1/8 inch in length and width.
- Address indicator marks must have a 1/16 inch clearance from any other element on the label except the lower right mark which may overlap or touch the label edge or boundary line.



2.4. Intelligent Mail[®] Package Barcode Segment

The Intelligent Mail[®] package barcode segment is one of the more stringently defined segments of the label and adherence to the following standards is required for proper processing and certification. Formal specifications on barcode creation may be found in appendix A of this guide, within the DMM, or in the supporting document Barcode, Package, Intelligent Mail[®] (USPS2000508) Specification.



2.4.1. Barcode Types

Two types of barcodes may appear on a USPS label:

- Postal routing barcode
- Intelligent Mail[®] package barcode (IMpb) or Confirmation Services barcode

These two barcodes may also be combined into a concatenated barcode. The concatenated barcode is the recommended format and is the only format detailed in this document.

2.4.2. Barcode Section 🤨

The Barcode section of the label is comprised of four elements:

- Identification Bars
- Barcode Banner Text
- GS1-128 Barcode
- Human Readable Representation of the Barcode data

Identification bars are required above and below the barcode section.

- Identification bars should be 1/32 to 1/16 inch thick.
- Identification bars should have a minimum clear space of 1/32 inch above or below the corresponding barcode banner or human readable text.
- Identification bars must extend for the full length of the barcode including the clear zone, but may extend further.

The barcode banner identifies the services and characteristics of the barcode.

- The barcode banner should be printed in an uppercase bold sans serif font which results in characters of 29/32 (.09") to 1/8 inch (baseline to capsline).
- The barcode banner should be centered above the barcode.
- The barcode banner must have a clear space of 1/8 to 1/4 inch between the banner and the barcode.
- The barcode banner should not exceed the length of the identification bars
- Appropriate banners can be found in the Confirmation Services Technical Guide, Publication 91; Implementation Guide to Intelligent Mail[®] Package Barcode, Publication 199; or the eVS[®] Business and Technical Guide, Publication 205.

The GS1-128 barcode contains machine readable information specific to the mailpiece. Formatting specifications for the GS1-128 barcode are provided in appendix A.

- The barcode must be at least 3/4 inch in height.
- The barcode must have a minimum clear space above and below of 1/8 inch.
- The barcode must have a minimum clear space of 1/4 inch to either side.

The human readable portion of the barcode should display the relevant data of the barcode as described below.

- The human readable text should be printed in an uppercase bold sans serif font which results in characters of 29/32 (.09") to 1/8 inch (baseline to capsline).
- The human readable text should be centered below the barcode.
- The human readable text must have a clear space of 1/8 inch to 1/4 inch between the text and the barcode.
- The human readable text should not exceed the length of the identification bars.
- When using the IMpb, the human readable should <u>not</u> include the Application Identifier 420 or the ZIP Code.³
- The human readable text should be parsed into groups of 4 with any remaining digits grouped at the end.⁴



Figure 9: Barcode Example

2.5. Additional Information and User Segment

2.5.1. Additional Information and User Segment ⁽³⁾

The additional information and user area may contain information required for specific services or programs which is not otherwise defined in this label guide, or for any information as otherwise defined by the label creator such as shipment date and weight⁵. This segment may be used for specific shipment or shipper information including branding and logos.

Though generally freeform in design, information in the additional information and user information segment should conform to the following conventions:

- Text should appear right justified (in order for OCR software to better differentiate this information from the address blocks).
- Any blocks of information should be separated by a minimum of four character spaces to increase readability by delivery associates.
- Font size of text in this area should be smaller than that used in the Delivery Address Area but should adhere to the same font and style guidelines as other text on the label (sans serif, capital letters, and a minimum 1/16 inch away from any edge or other element on the label).

 ³ This rule does not apply to legacy Confirmation Services concatenated barcodes which should include the "420"
AI and ZIP Code in the human readable text.

⁴ For legacy Confirmation Services concatenated barcodes the human readable should be parsed as follows: the 420 Al followed by a space; the ZIP Code followed by a space; the remaining data parsed into groups of four with any remaining digits grouped at the end.

⁵ Although somewhat common in current practice to include shipping information to the right of the return address, it is preferred to locate this information in the Additional Information and User Segment.

3. Recommended Label Formats

3.1. Design considerations

The USPS preferred label size is the shipping industry standard of 4x6 inches. However, it is understood that a single label layout or size will not fit all applications or parcel sizes and shapes. To this end, this document provides recommendations that may be applied to "non-standard" label sizes. A 6x3 inch and a 4x4 inch label are described herein, and are intended to assist shippers by defining smaller formats and sizes that may more readily fit parcels which do not support the standard 4x6 inch label.

3.2. 4x6 Labels

The 4x6 label format (4 inches wide and 6 inches tall) is the USPS preferred layout for parcel labels. This layout allows for optimum spacing of all elements and still allows space for additional information and user elements to be defined by the mailer. On this layout, the payment & branding, addressing and barcode segments can be grouped together with user specific elements placed at the top and/or bottom of the label.

3.2.1. Payment and Branding Segment

The 4x6 label allows for inclusion of all elements of the payment and branding segment including the service icon block and banner as well as a permit imprint or other postage payment method. The total size of this segment on the 4x6 label should be approximately 1 5/16 inches in height.

3.2.2. Addressing Segment

The 4x6 label allows sufficient space for inclusion of a return address, endorsements and a delivery address. This format provides an area for the delivery address of approximately 3 $1/4 \times 15/16$ inches (including the left margin offset and space between the address and address marks if used).

3.2.3. Barcode Segment

On all label sizes, the barcode segment requirements remains fixed as described in section 2.4 above. This segment of the label should be approximately 1 1/2 inches in height.

3.2.4. Additional Information and User Segment

On a 4x6 label the additional information and user segment may be placed above or below the payment and branding, addressing, and barcode segments or split between the two.

Care should be taken when placing the additional information and user segment at the top of the label not to include address information which could be misinterpreted by OCR scanning equipment as the return or delivery address.



3.3. 4x4 Labels

The 4x4 label format (4 inches wide and 4 inches tall) allows for less information than the 4x6 label but may be a useful format when shipping smaller sized parcels. The following guidance is provided for formatting a 4x4 label. However, placement of label elements may vary based on mailing requirements and as such the suggestions below are meant as guidelines as opposed to rules.

3.3.1. Payment and Branding Segment

The reduced size of the payment and branding segment will most likely preclude the use of the service icon block and service banner on a 4x4 label in order to devote the largest area possible to the addressing segment. Though it may be possible to include the service icon block if the addressing segment will be known to be small or not include endorsements, it will most likely be necessary to reduce the size of and right justify the payment and branding

segment in order to allow sufficient space for the return address. Please note that without a service banner, the class of mail will need to be identified as part of the indicia as described in the DMM and as shown in the example below.

3.3.2. Addressing Segment

The addressing segment on a 4x4 label is reduced from that of a 4x6 label but should still allow sufficient space for inclusion of a return address, endorsements and a delivery address. However, the area for the delivery address will be reduced to approximately 1 inch in height. This measurement assumes a single endorsement and may be increased or decreased depending on the need for fewer or greater endorsements or address lines. Reduced font sizes may also be necessary for the delivery address to maintain white space requirements though this is not preferred.



3.3.3. Barcode Segment

On all label sizes, the barcode segment requirements remains fixed as described in section 2.4 above. This segment of the label should be approximately 1 1/2 inches in height.

3.3.4. Additional Information and User Segment

A 4x4 label devoting maximum space to addressing may not have room for an additional information and user segment. If this area is required it will be necessary to alter or reduce the addressing segment accordingly.

3.4. 6x3 Labels

The 6x3 label format (6 inches wide and 3 inches tall) may be a useful format when shipping unusually shaped mailpieces such as mailing tubes. As with the 4x4 label, placement of label elements may vary based on mailing requirements and as such the suggestions below are meant as guidance as opposed to rules.

3.4.1. Payment and Branding Segment

The 6x3 label size requires that the payment and branding segment be reduced in size and right justified in order to allow room for other required elements. Please note that without a service banner, the class of mail will need to be identified as part of the permit imprint as described in the DMM and as shown in the example below.

3.4.2. Addressing Segment

The 6x3 format requires that the addressing segment be split, with the return address and endorsements left justified at the top of the label and the delivery address right justified below the payment and branding segment. Furthermore, the 6x3 label format reduces the area available for a delivery address to approximately 2 inches wide by 1 1/4 inches high which may necessitate the use of smaller fonts or a reduced number of lines in the delivery address. The reduced area for this section will also reduce the number of characters available per line.



Figure 12: 6x3 Label Example

3.4.3. Barcode Segment

On all label sizes, the barcode segment requirements remain fixed as described in section 2.4 above. This segment of the label should be approximately 1 1/2 inches in height. However, on the 6x3 label the barcode can be left justified and its identification bars should be limited to the length of the barcode plus its clear space requirement of 1/4 inch on either side.

3.4.4. Additional Information and User Segment

A 6x3 label created as described in this section will contain approximately 1/3 inch for the additional information and user segment. This area may be expanded based on the need for endorsements and delivery address space.

4. Other Label Types

4.1. Parcel Return Service (PRS) Label

Parcel Return Service (PRS) has specific labeling requirements which augment the general rules described in section 2 of this document.

4.1.1. Payment and Branding Segment

PRS labels require a postage guarantee imprint.

- The imprint must read "NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES"
- The imprint must be located in the upper right hand corner of the label.
- Below the imprint, a minimum of 3 horizontal bars are required.
- The bars must be uniform in length, at least 1 inch long, at least 1/16 inch think and evenly spaced.
- The imprint should not extend more than 1-3/4 inches from the right edge of the label.

Parcel Return Service labels do not support a Service Icon Block or Service Banner.

4.1.2. Addressing Segment

Return Address

The return address of the customer using the label to mail the parcel back to the permit holder must appear in the upper left-hand corner of the label. If the return address is not preprinted by the permit holder then space must be provided for the customer to enter a return address.

Parcel Return Service Legend

Above the delivery address the label must contain the Parcel Return Service legend.

- Line 1: The first line of the legend must read "PARCEL RETURN SERVICE" or alternatively "PARCEL RTN SVC" in capital letters at least 3/16 inches in height.
- Line 2: The second line of the legend must include the permit holder's name, left justified in capital letters, followed by the text "PERMIT NO." and the actual permit number. Though a size for line 2 is not mandated in the DMM, an 8-point font resulting in characters of approximately 3/32 of an inch is recommended.

The entire legend should be bordered by a minimum 1-point box with 1/16 inch clearance between the box and text.

Delivery Address

The delivery address must be formatted as follows:

- Line 1: The PRS agent or merchant's name
- Line 2: The text "PARCEL RETURN SERVICE" or alternatively "PARCEL RTN SVC."
- Line 3: The unique PRS 569## ZIP Code assigned by USPS to the permit holder in their PRS service agreement.



Figure 13: PRS 4x6 Label Example

The delivery address should also meet the following printing requirements:

• The delivery address except for the ZIP Code should be printed using a 10-point or greater sans serif font in upper case letters resulting in characters of 1/8 inch (baseline to capsline) or greater.

- The ZIP Code must be printed in at least a 12-point font.
- All lines of the delivery address should be left justified and evenly spaced.
- The delivery address should be located at least 1 inch from the left edge of the label.

4.1.3. Barcode Segment

Barcode formatting requirements remain fixed as described in section 2.4 above. However, for a PRS label the location of the barcode is service specific. The barcode must not be in the upper left, upper right, or lower right corners of the label as these are reserved for other information. The barcode may be placed below the delivery address on a 4x6 label or in the lower left corner on a 6x4 or 6x3 label.

A postal routing barcode is required. If a concatenated barcode cannot be used a postal routing barcode can be placed in any location on the label not occupied by other reserved data.

The barcode service banner for a concatenated barcode should include the additional notation "NDC" prior to the text "ZIP." If a concatenated barcode is not used then the postal routing barcode banner should include the notation "NDC."



Figure 14: PRS 6x4 Label Example

4.1.4. Additional Information and User Segment

The mailer identification assigned to the PRS permit holder must be included on the lower right-hand corner of the label formatted as follows:

- The mailer ID consists of a single uppercase alphabetic character followed by a two, three, or four-digit number with no spaces or dashes.
- The mailer ID must be at least 3/16 inches in height.

- The mailer ID should be surrounded by a box with a 1/16 inch clearance between the mailer id and the box.
- The mailer ID may optionally be printed in reverse text.

Additional information such as a company logo or Return Merchandise Authorization (RMA) number, etc. may be included in the additional information section if it does not interfere with any of the required elements of the PRS label.

4.2. Merchandise Return Service (MRS) Label

Merchandise Return Service (MRS) has specific labeling requirements which augment the general rules described in section 2 of this document. The specific requirements of MRS necessitate the use of a 6x4 label (or greater) in landscape mode.

4.2.1. Payment and Branding Segment

MRS labels require a postage guarantee imprint.

- The imprint must read "NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES"
- The imprint must be located in the upper right hand corner of the label.
- Below the imprint, a minimum of 3 horizontal bars are required.
- The bars must be uniform in length, at least 1 inch long, at least 1/16 inch think and evenly spaced.
- The imprint should not extend more than 1 3/4 inches from the right edge of the label.

If a class of mail price marking is specified it must be printed in 3/16 inch uppercase letters and placed above and to the right of the MRS legend (discussed below). Merchandise Return Service (MRS) labels do not support a Service Icon Block or Service Banner.

4.2.2. Addressing Segment

Return Address

The return address of the customer using the label to mail the parcel back to the permit holder must appear in the upper left-hand corner of the label. If the return address is not preprinted by the permit holder then space must be provided for the customer to enter a return address.

Merchandise Return Service Legend

Above the delivery address the label must display the Merchandise Return Service legend.

- Line 1: The first line of the legend must read "MERCHANDISE RETURN SERVICE" in capital letters at least 3/16 inches in height.
- Line 2: The second line of the legend must include the text "PERMIT NUMBER" or "PERMIT NO." followed by the actual permit number and the name of the issuing Post Office (city and state) in capital letters and Post Office ZIP Code. Though a size for line 2 is not mandated in the DMM, an 8-point font resulting in characters of approximately 3/32 of an inch is recommended.
- Line 3: The last line of the legend should include the name and delivery address (street or Post Office box number) of the permit holder. Though a size for line 3 is not mandated in the DMM, an 8-point font resulting in characters of approximately 3/32 of an inch is recommended.

The entire legend should be bordered by a minimum 1-point box with 1/16 inch clearance between the box and text.

Delivery Address

The delivery address itself should be formatted as follows:

- Line 1: The text "POSTAGE DUE UNIT"
- Line 2: The text "US POSTAL SERVICE"
- Line 3: The delivery address line for the postage due unit
- Line 4: The city, state and ZIP of the postage due unit at the Post Office where the MRS permit is authorized

The delivery address should meet the following printing requirements:

- The delivery address should be printed using a 10-point or greater sans serif font in upper case letters resulting in characters of 1/8 inch (baseline to capsline) or greater.
- All lines of the delivery address should be left justified and evenly spaced.
- The delivery address should be located at least 1 inch from the left edge of the label.



Figure 15: MRS Label Example with Barcode

4.2.3. Barcode Segment

Barcode formatting requirements remain fixed as described in section 2.4 above. However the location of the barcode is service specific and must be located in lower left corner of the label.

4.2.4. Additional Information and User Segment

Though the labeling requirements of the MRS label leave little room for user customization, additional information such as a company logo, RMA number, etc. may be included if it does not interfere with any of the required elements of the MRS label.

FROM:	NO POSTAGE NECESSARY IF
ACCEPTANCE POST OFFICE COMPUTE POSTAGE DUE	MAILED IN THE UNITED STATES
POSTAGE REGISTERED FEE (IF ANY) TOTAL POSTAGE AND FEES DUE	
REGISTERED MAIL SERVICE WITHOUT POSTAL INSURANCE DESIRED BY PERMIT HOLDER	
	PRIORITY MAIL
MERCHANDISE PERMIT NO. 1 ABC CO.	E RETURN LABEL CONESTOGA PA 17516 1234 MAIN ST
POSTAGE US POSTA PO BOX 9 CONESTO	DUE UNIT AL SERVICE 998 0GA PA 17516

Figure 16: MRS Label with Registered Mail Service and Class of Mail Marking

4.2.5. Postage Due Section

The MRS label requires a unique postage due section used by USPS to calculate postage. The postage due section should be placed above the MRS legend, to the left of any price markings and below the return address.

• All entries in the postage due section should be printed using a 8-point sans serif font in upper case letters resulting in characters of 3/32 inch (baseline to capsline) or greater.

Postage Due Header

- If no extra services are requested, the postage due header should read "POSTAGE DUE COMPUTED BY DELIVERY UNIT."
- If extra services other than registry are required the postage due header should read "POSTAGE DUE COMPUTED BY ACCEPTANCE POST OFFICE."
- If registry service is requested the postage due header should read "ACCEPTANCE POST OFFICE COMPUTE POSTAGE DUE."

Postage Due Markings

The postage due section must include the following markings right justified and aligned.

- POSTAGE _
- TOTAL POSTAGE AND FEES DUE _____

Extra Service Markings

If any of the following services are requested by the permit holder then the appropriate markings should appear between the POSTAGE and TOTAL POSTAGE AND FEES markings. Extra Service markings should not be included unless requested or approved by the permit holder. All markings should be right justified and aligned.

- INSURANCE FEE (IF ANY) ____
- RETURN RECEIPT FOR MERCHANDISE (IF ANY)
- SPECIAL HANDLING FEE (IF ANY) _____
- PICKUP ON DEMAND SERVICE FEE (IF ANY) _____
- REGISTERED FEE _____

When Registered Mail service is selected the following endorsement is also required below the "TOTAL POSTAGE AND FEES DUE" marking:

- For merchandise with a value > \$0.00 include the endorsement "REGISTERED MAIL SERVICE WITH POSTAL INSURANCE DESIRED BY PERMIT HOLDER."
- For merchandise with no value include the endorsement "REGISTERED MAIL SERVICE WITHOUT POSTAL INSURANCE DESIRED BY PERMIT HOLDER."

4.3. Scan Based Payment Labels

Scan Based Payment Labels for Priority Mail Return, First-Class Package Return and Ground Return services are available from USPS through Online Application Programming Interfaces (API). Business Rules for privately printed labels are forthcoming. Please contact USPS for more information on Scan Based Payment labels.

4.4. Priority Mail Open and Distribute (PMOD)

Priority Mail[®] Open and Distribute has unique requirements which affect the address and delivery segment of the label. Requirements for the remainder of the label segments remain unaltered⁶ with the exception of a minor change in the barcode banner.

4.4.1. Addressing Segment

Open and Distribute address labeling depends on the destination postal facility. Addressing data should be derived from the Drop Entry files located at the USPS FAST web site (http://fast.usps.com).

For shipments addressed to a DDU the address should be formatted as follows:

- The first line of the address should be "OPEN AND DISTRIBUTE AT:"
- The second line of the address should contain the destination facility name.

⁶ Open and Distribute shipments may have container labeling requirements in addition to address labels which are not discussed in this document. Please refer to the DMM for a full description of Open and Distribute program requirements.

- The third line should contain the destination facility street address.
- The last line should include the city, state and ZIP+4.

For shipments addressed to a SCF, ASF, ADC or NDC the address should be formatted as follows:

- The first line of the address should be "OPEN AND DISTRIBUTE AT:"
- The second line of the address should begin with the facility type (SCF, ASF, ADC, or NDC) followed by the city, state and ZIP Code of the destination facility.

Below the delivery address the label should indicate the class and processing category of the enclosed mail.

4.4.2. Barcode Segment

Barcode formatting requirements remain fixed as described in section 2.4 above. However the "ZIP" text identifier in the banner, normally associated with legacy concatenated barcodes, should be excluded and the banner text should read simply "USPS SCAN ON ARRIVAL." eVS users must continue to use the "eVS" banner extension.



Figure 17: PMOD Address and Label Example (Not drawn to scale)

4.5. Hold For pickup

The Hold For Pickup service has specific addressing requirements which affect the address and delivery segment of the label. Requirements for the remainder of the label segments remain unaltered. However, the addressing requirements of the Hold For Pickup label necessitate the use of a 4x6 or 4x4 label as these addressing elements cannot be oriented on a 6x3 label.

Hold For Pickup requires 3 address fields along with two identifying banners in the address and delivery segment which should be formatted as follows:

- The return address.
- Hold For Pickup banner
- The recipient address (for the person who will be picking up the parcel).
- Pickup location banner
- The delivery address (the post office that will hold the parcel for the recipient).

INTERNET SALES DEPT FAST AND EFFICIENT SUPPLY CO. 10474 COMMERCE BLVD DUPLEX B SILVER SPRINGS MD 20910-9999	Height = 5/8" 3/32" Left justified uppercase text
HOLD FOR PICKUP	3/16" Banner
HOLD FOR: JOHN DOE 1111 STATELINE LN FAIRFAX, VA 22030-1234	Height = 5/8" 3/32" Left justified uppercase text
PICKUP LOCATION	1/8" Bold sans serif centered text
ABC POST OFFICE 3333 MAIN STREET FAIRFAX, VA 22030-9998	Height = 7/8" 1/8" Indented uppercase text Postnet barcode required

Figure 18: Hold For Pickup Address Segment

4.5.1. Return Address

Requirements for the return address on a Hold For Pickup label remain consistent with the standard 4x6 or 4x4 label.

4.5.2. Hold for Pickup Banner

The Hold for Pickup banner identifies the mailpiece as requiring the Hold For Pickup service. It should be located directly below the return address and conform to the following requirements:

- The banner should be 3/16 inch in height.
- The banner should be printed in reverse type (white letters on a black background).
- The text "HOLD FOR PICKUP" should be printed in uppercase sans serif bold letters in a font which produces 1/8 inch text.
- There should be 3/32 to 1/16 inch of white space above and below the banner.

4.5.3. Recipient Address

The recipient address should contain the name of the person who will pick up the mailpiece (identification will be required). A full address is required for the recipient, however, to reduce space requirements a 3-line address is recommended. Properly formatted, the recipient address should require approximately 5/8 inch of label space, however, this space may be modified according to the mailer's needs as long as standard labeling and Hold For Pickup requirements are maintained.

- The recipient address must be preceded by the text "HOLD FOR:"
- The entire recipient address including the "HOLD FOR" title should be printed in an 8point or greater sans serif font resulting in characters of 3/32" (baseline to capsline) or greater. For more information on font selection please refer to appendix C.
- The return address should be printed in uppercase letters.
- All lines of the return address should be left justified and evenly spaced.

4.5.4. Pickup Location Banner

The Pickup Location banner identifies the pick up location. It must be located between the recipient address and delivery address and conform to the following requirements:

- The banner should be 3/16 inch in height.
- The banner should be printed in reverse type (white letters on a black background).
- The text "PICKUP LOCATION" should be printed in uppercase sans serif bold letters in a font which produces 1/8 inch text.
- There should be 3/32 to 1/16 inch white space above and below the banner.

4.5.5. Delivery Address

The delivery address should contain the address of the post office at which the mailpiece will be held. The delivery address portion of the label will occupy a height of approximately 7/8 inch, however, this space may be modified according to the mailer's needs as long as standard labeling and Hold For Pickup requirements are maintained.

- The delivery address should be printed at least 1/2 inch from the left edge of the label and at indented at least 1/4 inch from the left margin of the return address and recipient address.
- The delivery address should be printed using a 10-point or greater sans serif font in upper case letters resulting in characters of 1/8 inch (baseline to capsline) or greater.
- All lines of the delivery address should be left justified and evenly spaced.

5. Appendix A: Barcode Specifications

The following appendix has been excerpted, edited and abbreviated from the document: Barcode, Package, Intelligent Mail[®] (USPS2000508) Specification - Cage Code: 27085 2010-08-19 Rev C and adapted for commercial mailers. For non-commercial barcode usage or for additional details the reader is directed to the USPS2000508 specification and is encouraged to check with USPS for updated versions.

Whereas this guide describes the usage of barcodes on labels, and this appendix outlines barcode specifications, USPS0000508 remains the basis for all technical requirements.

5.1. Intelligent Mail[®] Package Barcode Data

The following fields are used to create an Intelligent Mail[®] package barcode (IMpb).

5.1.1. Postal Code Application Identifier (AI)

This is a specific 3-digit GS1 Application Identifier that is used to designate the presence of a delivery Postal Code within the barcode. This field will always be "420" and, must precede the Destination ZIP Code if such routing information is provided.

Source: Always "420."

5.1.2. Destination ZIP Code

This field should contain the destination ZIP code associated with the mailpiece being labeled. This field may be 5 or 9 digits in length depending on the use of a ZIP CodeTM or ZIP+4[®].

Source: Specific to the mailpiece.

5.1.3. Channel Application Identifier (AI)

This is a specific 2-digit application identifier used to identify both the business induction channel from which the mailpiece originated and to indicate where USPS may locate a payment record for the mailpiece. Valid IMpb Channel Application Identifiers are "92", "93", "94", and "95". AI "92" and AI "93" are for use by commercial mailers. AI "94" is for USPS online channel mailings and AI "95" is reserved for the USPS retail environment.

Source: For the commercial mailer, always a "92" when used with a 9-digit Mailer ID or "93" when used with a 6-digit Mailer ID.

5.1.4. Service Type Code (STC)

This 3-digit field identifies the mail class of the parcel and the presence of any extra services. The service type code also identifies if the mailpiece belongs to a special USPS program such as Open & Distribute or Merchandise Return Service.

Source: Specific to the mailpiece being identified. A complete list of service type codes can be found in the Confirmation Services Technical Guide, Publication 91; Implementation Guide to Intelligent Mail[®] Package Barcode, Publication 199; or the eVS[®] Business and Technical Guide, Publication 205.

5.1.5. Mailer ID (MID)

This field may be 6 or 9 digits in length. Most mailers will be assigned a 9-digit MID which is used in conjunction with AI "92." On an individual basis, some mailers or consolidators may be assigned a 6-digit MID, and would then use AI "93."

Source: Each mailer should obtain a unique MID from USPS.

5.1.6. Serial Number

Every barcode must contain a serial number which uniquely identifies the mailpiece associated with the mailer ID. Commercial mailers, depending upon the length of their mailer ID, may use a 7, 10, 11, or 14-digit serial number as defined in Table 2, IMpb Barcode Constructs.

Source: Defined by the mailer uniquely for each mailpiece. Use of a sequential number is recommended.

5.1.7. Mod 10 Check Digit

Every barcode construct must utilize a 1-digit, Mod 10 check digit as the final digit in the barcode data string. The Mod 10 check digit is calculated using the package identification code (PIC) portion of the data, which includes the channel AI, STC, MID and serial number.

Source: Calculated from the barcode data (See section 5.4 for additional details).



5.2. Intelligent Mail[®] Package Barcode Data Constructs

5.2.1. Commercial Mailer Constructs

The Intelligent Mail[®] package barcode is created by combining the barcode data previously defined as described in the chart below.

Туре	No.	Data Field	Field Length	Comments
g	1	Postal Code "Application Identifier (AI)"	3	Designates the presence of a delivery Postal Code. Field is always "420." Should be suppressed from human readable text.
Routing Dat	2	Destination ZIP Code	5 or 9	Identifies the postal routing ZIP Code and follows the Postal Code AI. Should be suppressed from human readable text.
ng Data)	3	Channel Application Identifier (AI)	2	Identifies the channel from which the mailpiece originated. Always "92" or "93" for commercial mailers ("91" supported for legacy confirmation services barcode users).
C or Tracki	4	Service Type Code	3	Identifies the mail class or product and the presence of any extra services. (A 2-digit STC is supported for AI 91)
ode (PIG	5	Mailer ID	6 or 9	Assigned Mailer ID 9-digit used with AI "92", 6-digit used with AI "93".
Identification C	6	Serial Number	7,10, 11,14	Uniquely identifies the mailpiece associated with this Mailer ID. May be 7 or 11 digits when used with a 9-digit Mailer ID. May be 10 or 14 digits when used with a 6-digit Mailer ID.
Package	7	Mod 10 Check Digit	1	A 1-digit, Mod 10 Check Digit is the final digit in the barcode data string calculated using the package identification code (PIC) portion of the data which is the string from the channel Al through the serial number.

Table 1: IMpb data field overview

Together, these data elements are combined to create an Intelligent Mail[®] package barcode. USPS supports 10 barcode constructs that can be formed from the data elements and lengths defined above. These are identified in the table below.

Construct	Postal Code Al	Dest ZIP	Channel Al	STC	MID	Serial Number	Check Digit	PIC Length	Total Barcode Length
C01	3	9	2	3	9	7	1	22	34
C02	3	5	2	3	9	11	1	26	34
C03	3	5	2	3	9	7	1	22	30
C04	0	0	2	3	9	7	1	22	22
C05	3	9	2	3	6	10	1	22	34
C06	3	5	2	3	6	14	1	26	34
C07	3	5	2	3	6	10	1	22	30
C08	0	0	2	3	6	10	1	22	22
C09	0	0	2	3	6	14	1	26	26
C10	0	0	2	3	9	11	1	26	26

Table 2: IMpb barcode constructs

Barcodes must be formatted to match one of these constructs. However, these various constructs allow for flexibility in field length to meet the requirements of different mailers.

Most mailers will be assigned a 9-digit mailer ID and will use a channel AI of "92" and constructs C01 – C04 or C10. On an individual basis, large mailers may be assigned a 6-digit mailer ID and would then use a channel AI of "93" along with constructs C05 – C09.

Depending on the length of the mailer ID and the postal code information, different length serial numbers may also be used. This option enables large-volume mailers to maintain uniqueness among their mailpieces, or alternatively, allows mailers to embed their own data within the IMpb serial number.

This variability in length allows the IMpb to be either 22, 26, 30, or 34 digits in length depending upon the channel AI, serial number and length of the postal code data (ZIP or ZIP+4). Although it is possible and acceptable for a mailer to use different barcode constructs on different mailpieces, it is recommended that one construct be chosen to provide consistency in the data exchanged between the mailer and USPS.

5.2.2. Formatting the Intelligent Mail Package Barcode

Once a barcode construct has been chosen, the barcode can be created as described in the example below.



IMpb GS1-128 Barcode Construct

Figure 20: Barcode Construction

5.3. Legacy Confirmation Services Barcode

In addition to the Intelligent Mail package barcode, USPS will continue to support legacy Confirmation Services barcodes until January 2013. The legacy Confirmation Services barcode differs from the Intelligent Mail barcode in five distinct areas:

- Length of the Postal Routing Barcode, which is fixed at 5
- Application Identifier, which is always 91
- Length of the Service Type Code, which is 2 digits
- Length of the Mailer ID, which is fixed at 9 digits
- Length of the Serial Number, which is fixed at 8 digits

The following fields are used to create a legacy Confirmation Services barcode:

5.3.1. Postal Code Application Identifier (AI)

This is a specific 3-digit GS1 Application Identifier that is used to designate the presence of a delivery Postal Code within the barcode. This field will always be "420" and, must precede the Destination ZIP Code if such routing information is provided.

Source: Always "420."

5.3.2. Destination ZIP Code

This field should contain the 5-digit destination ZIP code associated with the mailpiece being labeled.

Source: Specific to the mailpiece.

5.3.3. Tracking Application Identifier (AI)

This is a specific two-digit application identifier used to identify a Postal Service tracking barcode.

Source: Always 91.

5.3.4. Service Type Code (STC)

This 2-digit field identifies the mail class of the parcel and the presence of any extra services. The service type code also identifies if the mailpiece belongs to a special USPS program such as Open & Distribute or Merchandise Return Service.

Source: Specific to the mailpiece being identified. A complete list of service type codes can be found in the Confirmation Services Technical Guide, Publication 91 or the eVS[®] Business and Technical Guide, Publication 205.

5.3.5. Mailer ID (MID)

This 9-digit field identifies the mailer.

Source: Each mailer should obtain a unique MID from USPS.

5.3.6. Serial Number

This 8-digit field must contain a serial number which uniquely identifies the mailpiece associated with the mailer ID.

Source: Defined by the mailer uniquely for each mailpiece. Use of a sequential number is recommended.

5.3.7. Mod 10 Check Digit

Every barcode construct must utilize a 1-digit, Mod 10 check digit as the final digit in the barcode data string. The Mod 10 check digit is calculated using the package identification code (PIC) portion of the data, which includes the channel AI, STC, MID and serial number.

Source: Calculated from the barcode data

5.3.8. Legacy Barcode Construct

The legacy Confirmation Services barcode supports only two constructs. The concatenated barcode, which includes postal routing data, is the preferred construct and is defined as follows:

Туре	No.	Data Field	Field Length	Comments
g Data	1	Postal Code "Application Identifier (AI)"	3	Designates the presence of a delivery Postal Code. Field is always "420."
Routin	2	Destination ZIP Code	5	Identifies the postal routing ZIP Code and follows the Postal Code AI.
IC or	3	Tracking Application Identifier (AI)	2	Identifies the start of the Postal Service Tracking number. Field is always "91."
Code (Pl a)	4	Service Type Code	2	Identifies the mail class or product and the presence of any extra services.
on (5	Mailer ID	9	Assigned Mailer ID.
ficatic king [6	Serial Number	8	Uniquely identifies the mailpiece associated with this Mailer ID.
Package Identi Trac	7	Mod 10 Check Digit	1	A 1-digit, Mod 10 Check Digit is the final digit in the barcode data string calculated using the package identification code (PIC) portion of the data which is the string from the channel AI through the serial number.

Table 3: Legacy Confirmation Services barcode data field overview

123456789 12345678 12345 420 91 Mod 10 Stop Code Service Check Type Code Digit Postal Code Tracking Mailer ID Mod 103 Application Application (9 digits) Check Identifier Identifier Digit FNC1 FNC1 Serial Number (8 digits) Start Code **ZIP Code**

Legacy Confirmation Services GS1-128 Barcode Construct

5.4. Calculating the MOD 10 Check Digit

(5 digits) Figure 21: Legacy Barcode Construction

A MOD 10 check digit is used as the final digit in both the Intelligent Mail[®] package barcode and legacy Confirmation Services barcode. The check digit calculation is based only upon the digits that make up the Package Identification Code (PIC), specifically the Application Identifier, Service Type Code, Mailer ID and Serial Number. It does not include the Postal Routing Code Application Identifier or the Postal Routing Code (when present).

The following example from USPS200508 illustrates how to conceptually calculate a MOD 10 Check Digit.

For the data:

- Application Identifier = 91 •
- Service Type Code = 01 •
- Mailer ID = 123456789 •
- Serial Number = 00000001

Calculate the MOD 10 check digit using the following steps:

Create a two-row matrix, labeled 1 through 22, 1 being the most significant position Step 1: (i.e., right-most position). Starting from the least significant position of the matrix (position 22), copy each digit of the PIC all the way to position 2 (excluding the position of the check digit shown in the example below by a "?").

Position	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
PIC	9	1	0	1	1	2	3	4	5	6	7	8	9	0	0	0	0	0	0	0	1	?

Figure 22: Illustrative Matrix for Positions/Values in a PIC - Step 1

Starting from position 2 of the matrix, add the values from the even-numbered Step 2: boxes.

Position	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
PIC	9	1	0	1	1	2	3	4	5	6	7	8	9	0	0	0	0	0	0	0	1	?

Figure 23: Illustrative Matrix for Positions/Values in a PIC – Step 2

For the example: 1 + 0 + 0 + 0 + 9 + 7 + 5 + 3 + 1 + 0 + 9 = 35

Step 3: Multiply the result of step 2 by 3.

For the example: $35 \times 3 = 105$

Step 4: Starting from position 3 of the matrix, add the values from the odd-numbered boxes, skipping position 1 because it is the position of the check digit.

	Position	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	PIC	9	1	0	1	1	2	З	4	5	6	7	8	9	0	0	0	0	0	0	0	1	?
F	igure 24: III	ustra	tive	Matri	x for	Posi	tions	/Valu	es in	a Pl	c – s	tep 4	Ļ				-						

For the example: 0 + 0 + 0 + 0 + 8 + 6 + 4 + 2 + 1 + 1 = 22

Step 5: Add up the results for steps 3 and 4.

For the example: 105 + 22 = 127

Step 6: The check digit is the smallest number which, when added to the result obtained through step 5, gives a number that is a multiple of 10.

For the example: 127 + X = 130 therefore X = 3

Thus the resulting PIC is 9101 1234 5678 9000 0000 13.

(P)

NOTE: The dimension of the matrix (the number of cells) will vary depending on the length of the PIC, which in this example is 22.

The following code excerpt demonstrates one method of implementing this calculation programmatically. This example uses Visual Basic scripting which automatically converts data type providing the conversion from strings to integers. Your implementation may require additional steps.

Dim PIC_without_checkdigit As String	'Start with AI & STC & MID & Seq no.
Dim PIC_with_checkdigit As String	'Variable to hold the final PIC
Dim checkdigit As Integer	'Variable to hold the check digit
Dim i As Integer	'Variable to increment the loop
For i = Len(PIC_without_checkdigit) To 1 Step -2	'Loop back through even values
checkdigit = checkdigit + Mid(PIC_without_checkdigit, i, 1)	'Add the current value to the checksum
Next	'Next value
checkdigit = checkdigit * 3	'Multiply the checksum by 3
For i = Len(PIC_without_checkdigit) - 1 To 1 Step -2	'Loop back through the odd values
checkdigit = checkdigit + Mid(PIC_without_checkdigit, i, 1)	'Add the current value to the checksum
Next	'Next value
checkdigit = 10 - (checkdigit Mod 10)	'Subtract the Modulus 10 remainder from 10

PIC_with_checkdigit = PIC_without_checkdigit & checkdigit 'Concatenate the check digit to the PIC

Both the conceptual and programming examples above progress backwards through the data to calculate the check digit as this supports any length PIC whether it contains an odd or even number of digits. It is possible to calculate the same checksum by progressing forward through the data by first determining if the data string is odd or even.

Note: All current commercial IMpb barcode constructs (C01-C10), as well as the legacy Confirmation Services barcode, result in an initial data string length which is odd (without the check digit). However, this is subject to change.

5.5. Barcode Identification & Layout Requirements

In addition to the barcode itself, the Intelligent Mail package barcode segment of the label also includes a human-readable representation of the barcode data, a USPS banner and identification bars. These indicators, described below, serve as a guide in distinguishing the IMpb from other potential barcodes on a package.

5.5.1. Human-Readable Representation of the Encoded Barcode Data

A human-readable interpretation of the data characters represented in the barcode should be displayed as specified within this document and in compliance with any applicable guidance in the DMM. When using an IMpb, the Postal Routing Application Identifier (420) and the ZIP Code (5 or 9-digit) should be suppressed from the human-readable representation of the barcode data. When using a legacy Confirmation Services barcode, the 420 and ZIP Code should be included.

The human-readable text should be displayed at least 1/8 inch, but not more than 1/4 inch below the barcode. The printed height of the characters should be within the range of 1/10 inch to 1/8 inch. To enhance readability, the human-readable representation of the barcode data should be printed in a bold⁷, sans serif font and parsed or separated as defined in this document.

5.5.2. USPS Banner

A barcode banner must be printed in all uppercase letters centered above the barcode. A clear zone of 1/8 inch, but not more than 1/4 inch must be maintained between the bottom edge of this text and the top of the barcode. The banner should be printed in a boldface sans serif font. The printed height of the characters should be within the range of 1/10 to 1/8 inch. The USPS Banner may not exceed the total combined length of the barcode and the minimum clear zones to left and right of the barcode. A table of service banners can be found in the Confirmation Services Technical Guide, Publication 91; Implementation Guide to Intelligent Mail[®] Package Barcode, Publication 199; or the eVS[®] Business and Technical Guide, Publication 205.

When using a concatenated legacy Confirmation Services barcode, the characters "ZIP –" should precede the barcode banner. This is not necessary for the IMpb.

When creating label for use with the Electronic Verification Service (eVS) the characters "eVS" should follow the barcode banner.

5.5.3. Identification Bars

Horizontal black lines with a thickness within the range of 1/32 to 1/16 inch thick should be printed above the USPS Banner and below the human-readable representation of the barcode data. The lines must extend at least the total combined width of the barcode and the minimum clear zones to the left and right of the barcode, but may extend beyond this measurement up to the width of the label.

⁷ Not all fonts/typefaces print with the same thickness of stroke; "boldface" is meant as a subjective recommendation, conveying the need for emphasis and readability. Fonts such as Helvetica Bold or Arial Bold are examples of simple, boldface fonts which would satisfy USPS requirements

5.6. Physical Barcode Requirements

5.6.1. Barcode Symbology

The Intelligent Mail[®] package barcode consists of a data string encoded in a format generally following the GS1-128 specification that supports the use of Application Identifiers and concatenation⁸. However, USPS has selectively deviated from GS1-128 specifications in several instances as required by operational constraints. Unless otherwise specified, the mailer must follow GS1 system rules for encoding element strings in GS1-128 barcode symbols. Only subset C is be permitted for this application.

5.6.2. X-Dimension

A barcode's X-dimension is the nominal width of the narrowest bar or space element within the barcode. X-dimensions are typically measured in mils, one mil being equivalent to 1/1,000 of an inch. The Intelligent Mail[®] package barcode requires an X-dimension measuring between 0.013 inch (13.0 mils) and 0.021 inch (21.0 mils). X-dimensions ranging from 0.015 to 0.017 inch inclusive are preferred. The X-dimension must remain constant throughout the barcode symbol and may not vary.

5.6.3. Barcode Length

The overall length of the barcode is a function of the number of characters encoded and the X-dimension used.

5.6.4. Barcode Height

The overall minimum height of the barcode must measure at least 3/4 inch. USPS may permit an alternate height under certain conditions as specified in the DMM or by customer-specific USPS service agreement.

5.7. Quiet / Clear Zone Requirements

5.7.1. Minimum Horizontal Barcode Quiet / Clear Zone

A clear zone measuring at least ten times the X-dimension must be maintained immediately to the left and right of the barcode. No text, images, or other markings may appear in this area. USPS recommends a minimum clear zone of 1/4 inch.

5.7.2. Minimum Vertical Barcode Quiet / Clear Zone

A clear zone measuring at least 1/8 inch must be maintained directly above and below the barcode. No text, images, or other markings may appear in this area.

⁸ Mailers should pay close attention to the Data Constructs detailed in this document in order to construct the Intelligent Mail[®] package barcode properly. Concatenated barcodes use a second Function 1 (FNC1) character immediately following the ZIP Code to join the routing information with the traditional package identification code (PIC). Accidentally omitting this character will cause a format error.

5.8. Print Quality Requirements

5.8.1. Printer Resolution

USPS recommends a printer with a minimum resolution of 203 dots per inch (dpi) for printing the Intelligent Mail[®] package barcode. Dots per inch is a measure of a printer's resolution, in particular it is the number of individual dots that can be produced within a linear 1-inch (2.54 cm) space.

5.8.2. Reflectance / Symbol Contrast

The Intelligent Mail[®] package barcode must be printed on a substrate (e.g., shipping label) which is uniform in color. Barcode scanning equipment responds to differences between light reflected from the darkest bar and lightest space within barcode symbols, including quiet zones. Reflectance will be measured on a USPS-specified reflectance meter or barcode verifier.

5.8.3. Minimum/ Maximum Reflectance

The reflectance value of the darkest bar within the barcode symbol (Rmin) must be equal to or less than half the reflectance value of the lightest space (Rmax), when measured in the red spectral range between 630 nanometers (nm) and 675 nm.

 $R_{min} \le 0.5 R_{max}$

5.8.4. Symbol Contrast

Symbol contrast is the difference between the highest reflectance value (Rmax) and the lowest reflectance value (Rmin) within the barcode symbol including the quiet zones. The symbol contrast must be greater than or equal to 40 percent.

 $\begin{array}{l} SC = R_{max} - R_{min} \\ SC \geq 40\% \end{array}$

5.8.5. Barcode Quality

At least 70 percent of the barcodes in each mailing must have an overall symbol grade of "B" or better when measured with the appropriate aperture size in the red spectral range between 630 nanometers (nm) and 675 nm. The remainder must measure no less than a symbol grade of "C". Specified symbol grades are based upon the ISO/IEC 15416 Barcode Print Quality Guideline which recommends a method of measuring the quality parameters of printed barcode symbols.

The different symbol grades indicate print quality. Only the use of the appropriate aperture for the specific X-dimension of the barcode symbol under consideration will guarantee that the grade obtained from measurement of this symbol is the correct grade according to the ISO/IEC 15416 specified methodology. Therefore, in accordance with this methodology, the mailer should use a 10-mil aperture (0.250 mm) when measuring barcodes printed with X-dimensions between 0.013 and 0.021 inches (13 – 21 mils).

6. Appendix B: Addressing Considerations

The following appendix is provided as a "quick reference guide" to the reader to assist in proper addressing. For complete information on address preparation and formatting, the reader is directed to Postal Addressing Standards, Publication 28.

6.1. Address Elements

A residential delivery address may contain the following information.

Line	Data Element	Example	Requirement
1	Optional Endorsement Line	#BXNHHVF *********C002	Required for certain programs and discounts
2	Key Line Data	#ABCDEFGHIJKLMNO3#/12345678	Required for certain programs and discounts
3	IMb [™] or POSTNET™ barcode	ւ կուկիս կիսիկու կինուկիս կուսիներություններ	Not applicable for parcels but may be required on letters and flats for certain programs and discounts
4	Recipient Line	MS MILDRED DOE	Required
5	Delivery Address Line	12 RESIDENTIAL DR NW	Required
6	City, State, ZIP (or ZIP+4) Line	KRYTON TN 38188-0002	Required

Table 4: Residential Delivery Addressing

A business delivery address may contain the following information:

Line	Data Element	Example	Requirement
1	Optional	#BXNHHVF *********C002	Required for
	Endorsement		certain programs
	Line		and discounts
2	Key Line Data	#ABCDEFGHIJKLMNO3#/12345678	Required for
			certain programs
			and discounts
3	IMb™ or	լ վինվի նվինի սի նույլի վիրվորին ներեներին ան	Not applicable
	POSTNET™		for parcels but
	barcode		may be required
			on letters and
			flats for certain
			programs and
			discounts
4	Mailstop Code	MSC 4567ABCD	Optional
5	Attention Line	Ms MILDRED DOE	Optional
6	Individual Title	PROFESSIONAL ENGINEER	Optional
7	Functional Title	DESIGN ENGINEERING MGR	Optional

8	Group,	BRAKE CONTROL DIVISION	Optional
	Department,		
	Division		
9	Business / Firm	BIG BUSINESS INC	Required
	Name		
10	Delivery Address	12 E BUSINESS LN STE 209	Required
	Line		
11	City, State, ZIP	KRYTON TN 38188-0002	Required
	(or ZIP+4) Line		

Table 5: Business Delivery Addressing

At a minimum the delivery address should always contain the following information:

- 1. Business Name or Recipient Line
- 2. Delivery Address Line
- 3. Last Line (city, state and ZIP+4)

Other items, such as the optional endorsements line and key line may be required for certain USPS programs and discounts.

6.2. Delivery Addresses

For optimal mail delivery, the following formatting considerations should be observed:

- The delivery address line is critical to mail delivery and should be broken down into its distinct components of address number, pre-direction, street name, suffix, post-direction, secondary address identifier and secondary address with one space between each of the components.
- The delivery address line should be limited to 40 characters. Suggested standard abbreviations to reduce the address line length to 40 characters or less can be found in USPS Publication 28, however, if all of the delivery address cannot fit in one line then secondary address information can be placed immediately above the delivery address line.
- For domestic addresses, the last line of the address should contain the city, state and ZIP (or ZIP+4) Code. The city and state should be separated by one space and the state and ZIP Code should be separated by 2 spaces. With the exception of the hyphen used in ZIP+4 formatting, all punctuation may be omitted in the last line of the address block.
- International addresses should be formatted according to the standards of the destination county and include the country name in English below any other address lines.
- Above the delivery line, optional endorsements and key line data may be placed in accordance with the mail sorting or discount requirement of various USPS programs.

MR JOHN DOE 123 MAGNOLIA ST HEMPSTEAD NY 11590-1234

ATTN MR P KLAUSNER ABC COMPANY 1401 MAIN ST FALLS CHURCH VA 22041-1234

#BXNHJVF*******C002 #ABCDEFGHIJKLMN03#/12345678 µllq|q||||qulquulquulq||qulqllq||q||1|||q||1||1||

MS RACHEL MARJORY PROFESSIONAL ENGINEER IMPRESSIVE BUSINESS 323 E BUSINESS LN STE 1994 KRYTON TN 38188-0002

Figure 25: Delivery Address Examples

6.3. Return Addresses

Return address can be constructed in the same format as delivery addresses with the exception of optional endorsements and key line data. A return address is required in any of the following situations:

- Mail of any class bearing a printed ancillary service request or an ancillary service request embedded within an Intelligent Mail[®] barcode
- Official mail
- Mail paid with pre-canceled stamps (except Standard Mail pieces weighing 13 ounces or less and bearing a mailer's postmark)
- Materials bearing a company permit imprint
- Priority Mail[®] (including Critical Mail)
- Periodicals in envelopes or wrappers
- Package Services (except unendorsed Bound Printed Matter)
- Parcel Select (including Parcel Select Lightweight and Regional Ground)
- Registered Mail
- Insured mail
- Collect on Delivery (COD) mail
- Certified Mail[™] if a return receipt is requested
- Express Mail[®] if a return receipt is requested
- Detached Address Labels

ABC MOVERS 1500 E MAIN AVE SPRINGFIELD VA 22162-1010

MS B RICHARDSON APT C 5800 SPRINGFIELD GARDENS CIR SPRINGFIELD VA 22162-1058

INGE DIETRIC-DISCHER HARMANSTRASSE 7 5300 BONN 1 GERMANY

SSGT I KOSNOSKY UNIT 2050 BOX 4190 APO AP 96278-2050

7. Appendix C: Font Considerations

The appendix is included to clarify the definitions, terms and measurements used in this guide in regard to the use of text on labels and to clarify common misconceptions surrounding font and point size which can affect print readability and OCR capabilities.

7.1. Point Size

Point size is a standard measure of type and a point is approximately 1/72nd of an inch. However, that should not be interpreted to imply that a letter printed in a 72 point font will be 1 inch in height.

Font size includes a letter's ascent and descent. Ascent refers to that part of a character that rises above the base line, and descent refers to that part of a character that falls below. Few, if any, letters will comprise the entire points inherit in a font. A capital letter is measured from the base line of a font to its caps line, which is subset of the total font size or font height.





The size of the ascent and descent are incorporated in the font design and different fonts may be designed with different ascents and descents. For an example, refer to the differences between Times New Roman and Arial fonts below.



Because font sizes may differ, the recommendations in this guide are given in both fonts and wherever possible, recommended size in inches. Careful attention to character sizing will insure the most efficient processing of labels and parcels by USPS.

7.2. Sans Serif

Serifs are the short lines at the end of the main strokes of a character. Sans serif (without serif) refers to fonts without these lines. In the above example, Times New Roman is a serif font and Arial is a sans serif font. USPS OCR equipment requires Sans Serif fonts for optimum readability.

7.3. Recommendations

Fonts such as Arial, Verdana, Helvetica, Avant Garde, Century Gothic and Geneva are recommended for use in creating USPS labels.

8. Appendix D: Label Placement

Improperly applied labels can cause scanning problems and affect the quality of tracking and confirmation data provided by USPS. The following label placement guidelines will help insure maximum label scanning and processing.

- Always place the label fully on the address side of the package without overlapping the side or any other label.
- If for some reason, the Intelligent Mail[®] package barcode appears on a separate label from the Delivery Address, you should place the barcode above or to the left of the delivery address with less than 1/2 inch between the label and the address.
- Do not cover USPS barcodes with tape or plastic wrap that may negatively impact readability of these barcodes.
- When placing a barcode onto a convex or round object (such as a mailing tube), it is very important that the barcode be placed on the package such that the lines/bars of the barcode are perpendicular to the curve of the item (note: if a parcel curves in more than one direction, you should consider placing the item within a box or other flat-sided container).



9. Appendix E: Sample Labels









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Figure 34: Hold For Pickup





Ρ	PRIORITY MAIL US POSTAGE PAID PERMIT # CITY, STATE	
USP	S PRIORITY MAIL ®	
INTERNET SALES FAST AND EFFICI 10474 COMMERC SILVER SPRINGS	S DEPT ENT SUPPLY CO. E BLVD DUPLEX B MD 20910-9999	
RONALD RECEIVER C/O RICK RECIPIENT INTERNET PURCHASING OFFICE BIG AND GROWING BUSINESS CO. 8403 LEE HIGHWAY MERRIFIELD VA 22082-9999		
	USPS TRACKING #	
9205 5912 3456 7803 2394 01		
Figure 36: Priority Mail		







10. Appendix F: Reference Documents

The following documents providing input to this guide may be of interest to the reader:

- DMM 402, Elements on the Face of a Mailpiece
- DMM 602, Addressing
- DMM 604, Postage Payment Methods
- DMM 708, Technical Specifications
- GS1: General Specifications
- ISO/IEC 15416, Information Technology Automatic Identification and Data Capture Techniques Barcode Print Quality Test Specification Linear Symbols
- ISO/IEC 15417, Information Technology Automatic Identification and Data Capture Techniques – Barcode Symbology Specification Code 128
- Postal Addressing Standards, Publication 28
- Confirmation Services Technical Guide, Publication 91
- Express Mail Manifesting Technical Guide, Publication 97
- Implementation Guide to Intelligent Mail[®] Package Barcode (IMpb) for Confirmation Services and Electronic Verification System[®] (eVS[®]) Mailers, Publication 199
- Electronic Verification System[®] Business and Technical Guide, Publication 205
- USPS2000508, Barcode Intelligent Mail Specifications

11. Appendix G: Revision History

Version	Author	Example
1.0	P. Klausner	Original source document published 2012
1.1	P. Klausner	Corrected IMpb construct figure 20.

Table 6: Revision History