Designing Flat Mail — Contents

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Contents

Appendixes

Contents

1— Overview

Background

Since the early 1980s, the methods for sorting and distributing the nation's mail have changed fundamentally. To meet a drastic increase in volume and to use modern technology in the service of efficiency, the Postal Service has gone from mostly manual and mechanized processing to automation processing that requires no piece-by-piece handling. With the cost of processing mail steadily rising, automation was the logical choice to improve productivity and reduce expenses.

The first stage of moving to automation concentrated on letter-size mail and called for the Postal Service to apply barcodes to this mail. Optical character readers (OCRs) or remote barcoding systems (RBCSs) would put barcodes on mailpieces not already barcoded by customers.

The Postal Service later expanded its plans for automation to non-carrier route presort flats. However, investment in OCR equipment to apply barcodes to flats turned out to be cost-prohibitive. Therefore, the Postal Service decided to rely solely on customers to barcode their flats.

Fortunately, current mail production methods make it practical for you—the customer—to apply POSTNET barcodes while printing the address onto your flat or label. At the post office, high-speed flat sorting machines (FSMs) equipped with barcode readers then can sort this barcoded mail automatically.

When you prepare your non-carrier presort route flats to meet specific requirements, you can be eligible for automation rates. To meet these requirements, your mail must be *machinable* and contain a *readable* ZIP+4 barcode.

Machinable means that your flats are the right size and made of the correct material for fast transport through the system. *Readable* means that the mail has an accurate, customer-applied ZIP+4 barcode that can be read by the barcode reader on a flat sorting machine.

By preparing your non-carrier route presort flats to meet specific requirements, you may be eligible to receive an automation-related discount.

Benefiting From Automation

Designing your flats for barcode reader processing enables the mail to be sorted by faster and more efficient processing methods. The chances are that your mail will reach its destination sooner.

By prebarcoding your flats, you may be eligible to receive an automation-related discount. The flat mail barcoding requirements are similar to those of letter mail barcoding. The major difference is that flat mail requires 9-digit ZIP+4 barcodes, whereas letter mail requires 11-digit delivery point barcodes. The additional two digits for letters allow the Postal Service to sort letter mail into carrier sequence. This significantly reduces the time used by carriers to sort letter mail before delivery.

The barcoding strategy for flats, however, is to sort non-carrier route presort flats to the carrier or route level using ZIP+4 POSTNET barcode information. Therefore, to be eligible for a flats barcoded postage rate, a 9-digit (ZIP+4) barcode is required. However, you may use the delivery point barcode on your flats if that is more convenient.

In this publication, you will learn how to make your flats physically compatible with flat sorting equipment; to meet standardized addressing criteria; and to use POSTNET barcoding so that you can qualify for a postage discount.

All requirements for barcoding flats are in the Domestic Mail Manual (DMM). If you want to benefit from the ZIP+4 Barcoded rate, the DMM fully explains the requirements.

All requirements for barcoding flats are in *Domestic Mail Manual* (DMM) C820. If you want to take advantage of the flat-size ZIP+4 Barcoded rate, the DMM explains all the requirements.

Aside from the steps that you must take if you want to qualify for a discount, everything in this publication is a voluntary guideline. But it is in your best interests to prebarcode your flats and ensure that the mail is machinable.

If your flats are not prebarcoded or physically compatible with Postal Service flat sorting machines, your mail must be sorted by slower and more expensive methods. Conversely, if you meet the requirements for automated handling of your flats, you not only help the Postal Service get your mail to the right address faster, you also help hold down operating expenses. That in turn means that rates remain stable longer, and future rate increases are likely to be smaller and less frequent.

So, prebarcode your flats...and you will receive the best service available!

Other Publications

You can obtain these publications on postal automation from your postal business center (see Appendix G for telephone numbers):

- Publication 25, *Designing Letter Mail.* This publication contains guidelines on preparing letter-size mail for improved service and postage savings.
- Publication 28, *Postal Addressing Standards.* This publication contains comprehensive guidelines for all styles of addressing.
- Publication 221, *Addressing for Success.* This publication contains guidelines on preparing daily office mail for automated processing.
- Publication 353, *Designing Reply Mail.* This publication contains step-by-step illustrations for preparing business reply mail and courtesy reply mail.

Mailpiece design analysts, account representatives, and postal business center personnel can help you implement the guidelines in this publication.

Mailing Regulations

You can order copies of the two manuals containing regulations for domestic and international mail—the *Domestic Mail Manual* and the *International Mail Manual*—from the U.S. Government Printing Office by writing to the following address for subscription prices:

NEW ORDERS
SUPERINTENDENT OF DOCUMENTS
US GOVERNMENT PRINTING OFFICE
PO BOX 371954
PITTSBURGH PA 15250-7954
Telephone: 202-783-3238

You can also order electronic versions of these two manuals from the following vendors licensed by the Postal Service:

GLOBAL VILLAGE PUBLISHING INC
1101 KING ST STE 190
ALEXANDRIA VA 22314-2944
Telephone: 1-800-394-4874

WINDOW BOOK INC
300 FRANKLIN ST
CAMBRIDGE MA 02139-3708
Telephone: 1-800-370-2410

Assistance

Besides this publication and the DMM, other help is available if you decide to make your flats eligible for a ZIP+4 Barcoded rate. Postal Service mailpiece design analysts, account representatives, and postal business center personnel can help you implement the guidelines in this publication.

Account representatives and postal business center personnel can answer your questions about discounts for flat-size ZIP+4 Barcoded rates. Use the telephone numbers in Appendix G to obtain more information or help.

2 — Understanding Flat Sorting Machines and Barcode Readers

Because most of the guidelines in this publication are based on operational characteristics of Postal Service flat sorting machines equipped with barcode readers, knowing how this equipment works can help explain the guidelines.

Flat Sorting Machines

Flat sorting machines (FSMs) require human intervention in varying degrees. Operators read the address on the flats, key the ZIP Code information into the machine's computer using a data-entry keypad, and insert the flat into the machine's induction station. Once the flat is in the induction station, the computer assigns the flat to the appropriate destination bin.

To automate this process, all Postal Service FSMs were equipped with barcode readers to enhance the speed, accuracy, and efficiency of processing. The barcode readers ignore all alphanumeric printing and read only POSTNET barcodes.

The wide-area scanners can read barcodes printed virtually anywhere on the address side of the flat, eliminating the need for an operator to read and key address information. The only human intervention needed is the manual insertion of the flat into the machine's induction station.

This innovation has made it possible for business mailers to participate in postal prebarcoding programs and receive automation-related discounts. Customer prebarcoding of non-carrier route presort flats is the *only* automation-related discount for flats.

Additionally, the Postal Service is actively developing an automatic induction unit for flat sorting machines. This feature makes processing barcoded flats even more efficient by eliminating the need for personnel to insert the flat into the machine's induction station.

To be sorted on a flat sorting machine, a flat must meet certain acceptable ranges and characteristics for size, shape, contents, and packaging (see Chapter 3). The need for machinable mail is important because flats are moved at high speeds through a series of metal joints, belts, and rollers. Flats considered nonmachinable cannot be processed by a flat sorting machine. They must be manually distributed, which is both labor-intensive and costly.

A list of vendors that offer hardware and software for POSTNET barcoding is available from your Postal Service account representative or postal business center. The barcoding equipment and software offered by these vendors are certified by the Postal Service.

The FSM 1000 is a new flat sorting machine that handles a wider range of flats than the FSM 881—today's current flat sorting machine. Because productivity of the FSM 1000 is lower than that for the FSM 881, benefits of using the FSM 1000 are limited to flats processed manually. The FSM 1000 will be used to sort some of the flats that cannot be sorted on the FSM 881. The FSM 1000 will complement rather than replace the FSM 881.

High-Speed Flats Feeder

The high-speed flats feeder (HSFF), designed to induct machinable flats into the FSM 881, can handle up to 10,000 flats an hour. The HSFF program is currently in the prototype design phase. Deployment of the HSFF depends on the success of the prototype and on the growth in volume of barcoded flat mail.

Barcode Readers

In addition to the need for machinable flats, successful barcode processing requires an accurate, readable barcode, which can be printed almost anywhere on the address side of the mailpiece (see pages 18 through 24). Barcoding equipment and software, which apply the postal barcode as part of the delivery address, are available from many companies at prices that are quickly offset by postage savings.

A list of vendors that offer hardware and software for POSTNET barcoding is available from your Postal Service account representative or postal business center. The barcoding equipment and software offered by these vendors are certified by the Postal Service to produce POSTNET barcodes that satisfy the technical specifications in Chapter 5.

3—Meeting Machinability Standards

Throughout this publication (unless otherwise noted), all instructions and specifications refer to flats. Flats must meet the general and specific standards for mailability and respective class of mail. The length and height of an automation-compatible flat is not determined by the orientation of the address (see DMM C820).

Mailpiece Dimensions

Flat-size mail is a challenge to process on flat sorting machines. The mail must move quickly over a series of metal joints and between belts and rollers that take it past the barcode reader to its appropriate bin. Machinability is important because flat sorting equipment cannot process all sizes and types of flats.

Preparation methods for mailing vary. Some flats are mailed open; others are folded, enveloped, or enclosed in sleeves or polywrap material. Flat-size mail must fall between the minimum and maximum sizes shown in Table 1 to prevent jamming during transport.

Table 1

Flat Mail Machinability Dimensions

Dimensions[1]	Minimum	Maximum
Height	6"	12"
Length		
6" to 7-1/2" high	5"	15"
Over 7-1/2" high	6"	15"
Thickness	0.009"	0.750"
Weight		
First-Class	None	11 oz.
Second-Class	None	16 oz.
Third-Class	None	Under 16 oz.

[1] For flat-size pieces prepared as single sheets or in envelopes, full-length wrappers, or sleeves, the length is the longest dimension. The height is the dimension perpendicular to the length.

For flat-size pieces with a bound or folded edge, the height is the dimension parallel to the bound or folded edge. The length is the dimension perpendicular to the height. If the piece is folded more than once, or bound and then folded, the height is based on the final fold.

Nonstandard-Size Surcharge

Although First-Class flats have no minimum weight requirements, any flat-size piece weighing less than 1 ounce is subject to a postage surcharge if any of the following apply:

- Its length exceeds 11-1/2 inches.
- Its height exceeds 6-1/8 inches.
- Its thickness exceeds 1/4 inch.
- Its length divided by its height is less than 1.3 or more than 2.5.

The nonstandard-size surcharge does not apply to pieces weighing more than 1 ounce or to pieces mailed at the second- or third-class ZIP+4 Barcoded rates for flats.

Incompatible Materials and Sealing Methods

Materials that include polywrap, shrinkwrap, or other plastic-like coverings are incompatible with Postal Service flat sorting machines.

Although the Postal Service continues to look for ways to modify flat sorting equipment to process more sizes and shapes, some flats that meet the appropriate size requirements are still nonmachinable.

Certain materials are also incompatible with Postal Service equipment because they cannot be successfully processed at high speeds. These materials include polywrap, shrinkwrap, and other plastic-like coverings.

Clasps, staples, string, buttons, and similar protrusions should not be used to close flats because they can jam equipment and damage the mail during processing. For the same reason, edges should not be notched, scalloped, or curved.

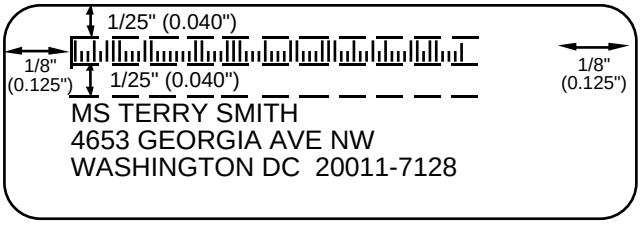
Window Envelopes and Inserts

For barcode processing, window envelopes and inserts must be designed so that the entire address and postal barcode appear in the window area, allowing for shifting of the insert.

POSTNET barcodes preprinted on inserts must maintain a minimum clearance area of 1/8 inch (0.125 inch) from the left and right edges of the window opening (or other text or graphics) when the insert moves in those directions.

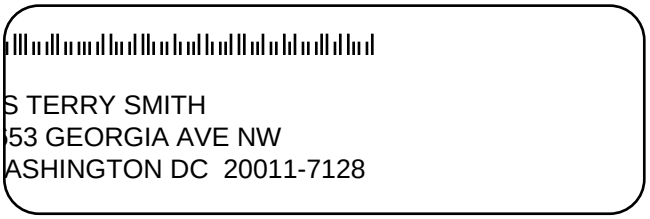
When the barcode is printed as the top or bottom line of the address block, a minimum clearance of 1/25 inch (0.040 inch) must be maintained between the POSTNET barcode and the window edge, above or below, allowing for full movement of the insert. This 1/25-inch (0.040-inch) minimum clearance is also required between the top and bottom of the barcode and any other printing.

Barcode/Window Clearance



(Not Drawn to Scale)

Excessive Insert Shift



(Not Drawn to Scale)

Either open or covered windows may be used for addresses and address block barcodes. The material for covered windows should be clear or transparent (low-gloss materials are best) and securely attached on all edges. Cellophane and polystyrene are popular window-covering materials.

All window coverings must be free of wrinkles, streaks, fogging, colors, and other conditions that can obscure the barcode during processing. All barcode information, as read through the window, should satisfy minimum reflectance guidelines.

A minimum print reflectance difference (PRD) of 30% is needed to read POSTNET barcodes on a flat sorting machine barcode reader. This requirement is generally satisfied by black or dark ink on a white or pastel background.

The entire address and barcode must appear in the window and during full movement of the insert.

Labels and Stickers

Address labels and certain types of stickers placed on the outside of the flat should be applied using methods and materials that prevent these labels from being damaged or removed during high-speed processing.

Permanent labels and stickers (not designed to be removed and reused) should be applied with Dextrin-based (recyclable) adhesives.

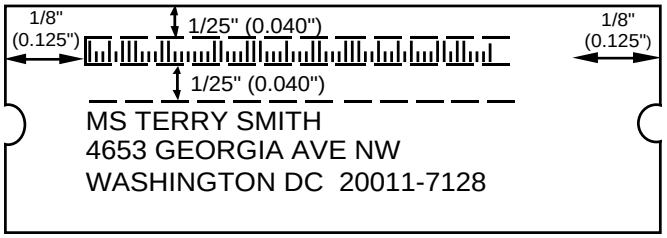
Pressure-sensitive peel-off labels and stickers intended to be permanent should have a minimum peel adhesion value of 8 ounces per inch. (Peel adhesion value is determined by the force required to remove, at a 90-degree angle, the label or sticker from a stainless steel surface.) Manufacturers and suppliers of pressure-sensitive labels and stickers can provide the peel adhesion values of their products.

Refer any questions about mailpiece dimensions, materials, construction, or contents to your Postal Service mailpiece design analyst, account representative, or postal business center.

Labels and stickers to be removed from a backing or liner and reused (such as “sandwich labels”) should meet these guidelines:

- The adhesive on the backing or liner, which is permanently attached to the mailpiece, must have a minimum peel adhesion value of 8 ounces per inch when applied to a stainless steel surface.
- The adhesive on the removable label must have a minimum peel adhesion value of 2 ounces per inch when applied to the face of the backing or liner.
- The adhesive on the removable label must have a minimum peel adhesion value of 8 ounces per inch when *reapplied* to a stainless steel surface.

Address Label



(Not Drawn to Scale)

The required minimum clearances for the POSTNET barcode, when applied to address labels, are the same as those for window envelopes as follows:

- 1/8 inch (0.125 inch) between the barcode and the left and right edges of the label.
- 1/25 inch (0.040 inch) between the top and bottom of the barcode and label edges or other printing.

Flexibility and Rigidity

In addition to size, shape, and material used to create the flat, flexibility and rigidity are important. For example, stiffness also determines whether a flat is machinable. If a flat is too stiff, it will not go around turns in the flat sorting machine; if too flimsy, the flat might catch in the metal joints of the machine.

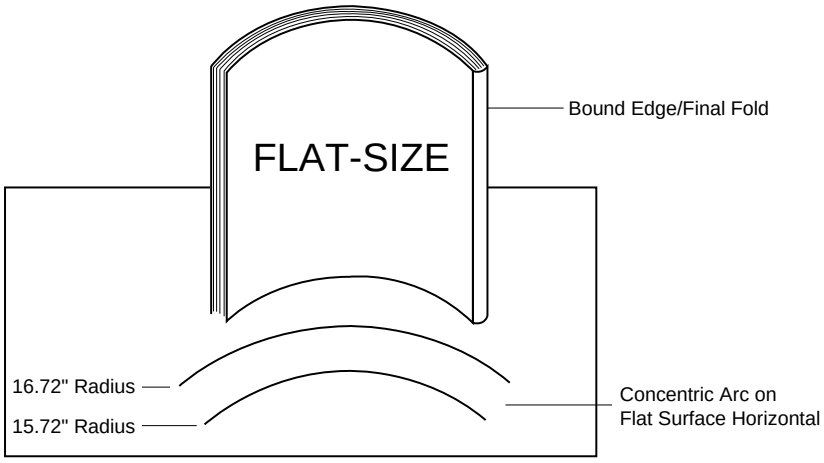
Pens, pencils, keys, large coins, and rigid items are not recommended for inclusion because they can damage the mailpiece and the processing equipment. Items such as credit cards, which are attached to the contents of the mail, are usually acceptable.

For machinability, contents should be uniformly and securely enclosed to avoid shifting. Shifting can jam the flat sorting machine because of erratic movement as the flat passes through the machine to its designated bin.

Flats containing rigid cardboard-type materials must fit between the two curved lines on the Flat Mail Machinability Tester without touching either of the two lines (see illustration on page 12). The pieces must fit between the two concentric arcs—one arc having a radius of 16.72 inches, the other arc having a radius of 15.72 inches (see top illustration on page 13). These concentric arcs represent the turns of the Postal Service flat sorting machines through which the mailpiece must be transported.

Flats containing rigid cardboard-type materials are considered machinable if they fit between the curved lines shown on the Flat Mail Machinability Tester and do not touch either of the two lines.

Turning Ability, Flexible Flat



Flat Mail Machinability Tester

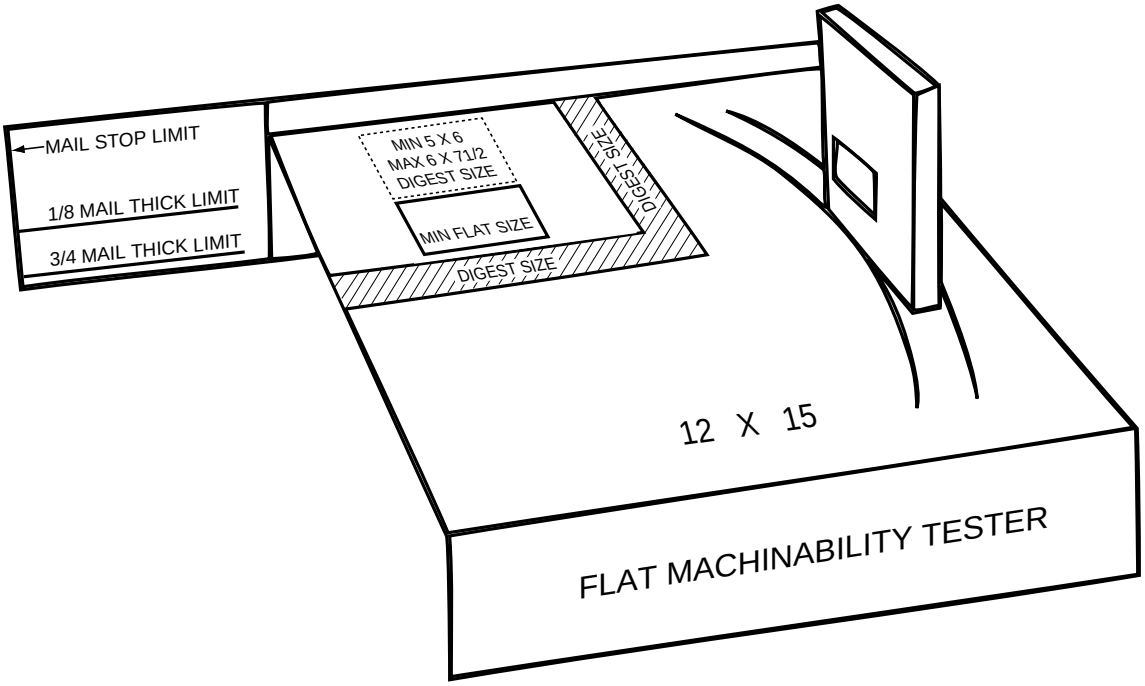
The Postal Service developed the Flat Mail Machinability Tester to determine whether flats meet the machinability requirements to qualify for ZIP+4 Barcoded rates.

You can have your flats tested on this device by contacting your local Postal Service mailpiece design analyst or account representative.

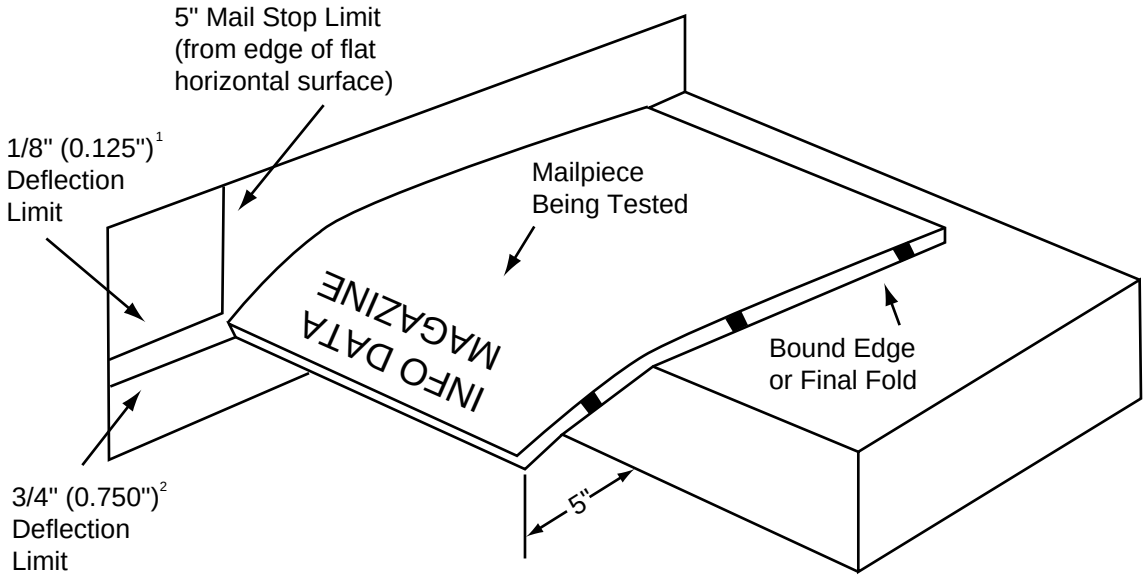
You can also order a Tester from the Postal Service by providing one shipping label (peel-and-stick or gummed-back label) for each device and including customer name/organization and mailing address with POSTNET barcode. Send your request and label to this address:

FLAT MAIL MACHINABILITY TESTER
TOPEKA MATERIAL DISTRIBUTION CENTER
US POSTAL SERVICE
500 SW MONTARA PKY
TOPEKA KS 66624-2602

Turning Ability, Rigid Flat



Deflection of Flat-Size Mail



[1]1/8" (0.125") limit is the maximum deflection allowed for flat-size mailpieces 1/8" (0.125") thick or less.

[2]3/4" (0.750") limit is the maximum deflection allowed for flat-size mailpieces between 1/8" (0.125") and 3/4" (0.750") thick.

4—Addressing for Automation

Although a standardized address is not required in a ZIP+4 Barcoded rate mailing of flats, mailers should use complete and standardized addresses on all mailpieces.

Standardized Address

A standardized address contains all delivery address elements as matched against the Postal Service ZIP+4 file and contains the correct city name, state, and ZIP+4 code. Standardized addresses enhance mail processing and delivery, reduce undeliverable-as-addressed mail, and lower costs through improved efficiency.

Complete and standardized addresses should be used on all mail to enhance processing and delivery.

Address Format

Recommendations

Addresses should be complete and include secondary address designators such as directionals (e.g., NE, SW) and apartment, suite, or room numbers.

The recommended address format is shown below and described in the following paragraphs. Each line of the address is discussed, starting from bottom to top.

(OPTIONAL)	Nonaddress Data →	**FEL 01225-66 H**
(OPTIONAL)	Information/Attention →	**HARRY FELDMAND PRES**
	Name of Recipient →	**FELDMAN INSURANCE AGENCY**
	Delivery Address →	**236 SUNSET AVE RM 101**
	Post Office, State, ZIP →	**LOS ANGELES CA 90012-0001**

Post Office, State, and ZIP Code Line

For domestic mail, the post office (city), state, and ZIP Code or ZIP+4 code should appear, in that order, as the bottom line of the address. If all three elements cannot fit on one line, the ZIP Code or ZIP+4 code may be placed on the line immediately below the post office and state, aligned with the left edge of the address block. The standard two-letter state abbreviation (see Appendix D) should be used.

Delivery Address Line

The line immediately above the bottom line is the delivery address line. The street address, post office box number, rural route number and box number, or highway contract route number and box number should appear on this line.

Be sure to include apartment, suite, or room number immediately after the street address to ensure delivery.

Mail addressed to the occupants of multiunit buildings should include the apartment, suite, or room number (or other unit designation) immediately after the street address. If necessary to reduce the length of the delivery address line, the apartment number or other designator should be placed on the line immediately above the delivery address line. When use of a building name is necessary, it should also be placed on the line immediately above.

When addressing mail to a rural route, highway contract route, or post office box, print the information as shown in the following examples.

Rural Route:	RR 3 BOX 10
Highway Contract Route:	HC 2 BOX 10
Post Office Box:	PO BOX 184

Dual Addressing

Dual delivery addresses, such as a street address and a post office box, are not recommended. If dual addressing is used, one delivery designation should be placed on the delivery address line and the other on the line immediately above. The two designations must never be placed together on one line. *The mail will be delivered to the address on the delivery address line.* The ZIP Code, ZIP+4 code, or delivery point code should always reflect the address shown on the delivery address line.

The ZIP Code, ZIP+4 code, or delivery point code should always reflect the address shown on the delivery address line.

Mail delivered here →

GRAND PRODUCTS INC
100 MAJOR ST
PO BOX 200
NEW YORK NY 10001-0200

Name of Recipient Line

The name of the intended recipient (business or individual) should appear on the line above the delivery address line. This should be the third, fourth, or fifth line from the bottom, depending on overflow from the delivery address line because of dual addressing or other extra wording.

Information/Attention Line

The line above the name of recipient line is optional for additional address information. This line can be used to direct mail to a specific person or provide other information that facilitates delivery within a company.

Nonaddress Data Line

Any nonaddress data (such as account numbers, subscription codes, presort codes, advertising) should appear on the line above the name of recipient line or the information/attention line, whichever is higher.

Military Addresses

A new format for Army and Air Force post office (APO) and fleet post office (FPO) addresses was introduced in December 1991. APO or FPO is the equivalent of a city name. AE, AP, and AA are the equivalents of state abbreviations. AE (ZIP Codes 090–098) designates Armed Forces in Europe, the Middle East, and Africa. AP (ZIP Codes 962–966) designates Armed Forces in the Pacific. AA (ZIP Code 340) designates Armed Forces in Central America and South America.

MAJOR JOHN THOMAS
7024 AIRPS
PSC 3 BOX 2051
APO AE 09021-2072

PC1 DAVID JONES
X-1 DIV/ADMIN
USS KITTY HAWK (CVA-61)
FPO AP 96634-2770

PFC SUSAN SMITH
COMPANY A 122 SIG BN
UNIT 20511 BOX 4290
APO AA 34049-2342

Foreign Addresses

Mail addressed to foreign countries must include the country name written in English in capital letters (no abbreviations) as the only information on the bottom line.

MR THOMAS CLARK
117 RUSSELL DRIVE
LONDON W1P 7HQ
ENGLAND

Exception: Mail addressed to Canada may use either of the following formats when the postal delivery zone is included in the address.

MRS HELEN K SAUNDERS
1010 CLEAR STREET
OTTAWA ONTARIO K1A 0B1
CANADA

MRS HELEN K SAUNDERS
1010 CLEAR STREET
OTTAWA ONTARIO CANADA
K1A 0B1

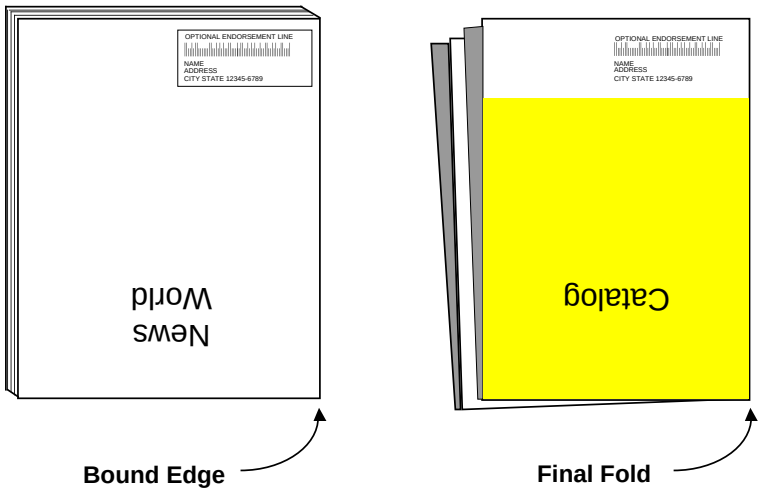
Additional information on mailing to foreign countries is in the *International Mail Manual* (IMM). Contact your local post office for assistance.

Address Block Location

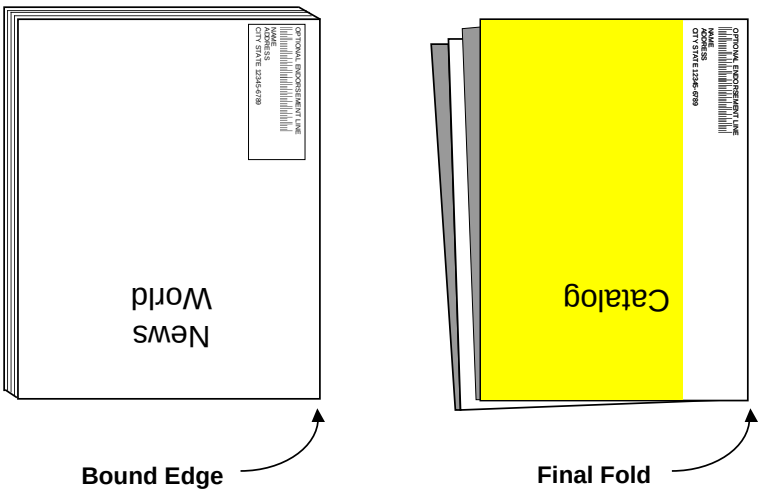
Flats With Bound Edges or Final Folds

The address or address label on magazines, catalogs, and similar publications should be located so that when holding the publication with the bound or folded edge to the right, the address appears in the upper right-hand corner, perpendicular to the bound or folded edge as shown in Example A.

Example A
Address Perpendicular
to Bound Edge or Final Fold



Example B
Address Parallel
to Bound Edge or Final Fold



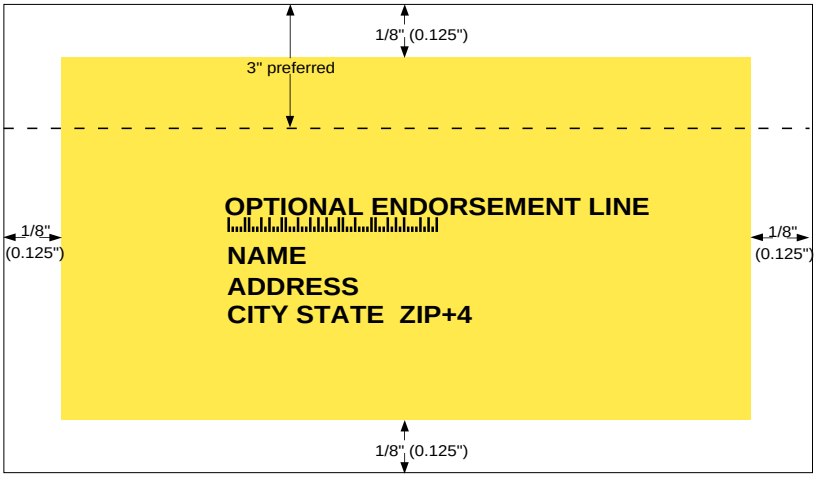
(Not Drawn to Scale)

An acceptable but less desirable address location is one parallel to the bound or folded edge as shown in Example B. In either case, the address may be placed on the front or back cover of the publication.

Enveloped Flats

On flats other than magazines, catalogs, and other bound-edge flats (such as First-Class and third-class enveloped flats), the front center of the mailpiece at least 1/8 inch (0.125 inch) below the top (3 inches preferred) is designated as the address block location (see Example C). This is similar to the address block location on letters. It does not matter whether the flat is oriented in the "portrait" or "landscape" mode.

Example C
Address Block



(Not Drawn to Scale)

For enveloped flats, the front center of the mailpiece is designated as the address block location.

5—Using POSTNET Barcodes

Postal customers may print POSTNET barcodes directly onto flats or labels attached to flats. In addition to service improvement, customer prebarcoding offers reduced mailing costs through lower postage rates.

Background

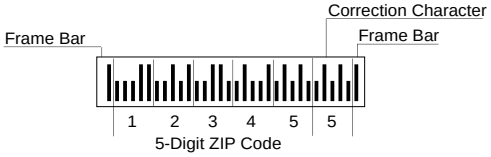
The POSTNET (POSTal Numeric Encoding Technique) barcode was originally developed by the Postal Service to encode ZIP Code information on letter mail for rapid and reliable sorting by inexpensive barcode readers. In 1990, the Postal Service announced that the POSTNET barcode would also be used for flats. The POSTNET barcode can represent a 5-digit ZIP Code (32 bars), a 9-digit ZIP+4 code (52 bars), or an 11-digit delivery point code (62 bars).

Besides service improvement, customer barcoding offers reduced mailing costs through lower postage rates.

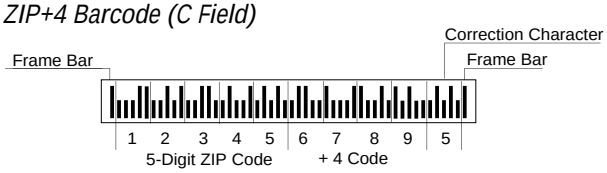
POSTNET Format

Whether it represents 5-, 9-, or 11-digit ZIP Code information, the POSTNET barcode should always be printed in a format that begins and ends with a frame bar (full or tall bar). To ensure POSTNET accuracy during processing, a correction character (five bars) must also be included immediately before the rightmost frame bar. The correction character is the number that, when added to the sum of other digits in the barcode, results in a total that is a multiple of 10. For example, the sum of 12345-6789 is 45. A correction character of 5 results in the sum of the 10 digits being a multiple of 10 (see ZIP+4 code example below).

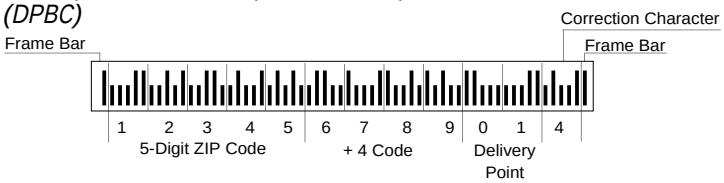
5-Digit Barcode (A Field)



ZIP+4 Barcode (C Field)



Delivery Point Barcode (C Prime Field) (DPBC)



(Not Drawn to Scale)

Code Elements

The basic elements of the POSTNET barcode are binary digits, represented as full bars and half bars (or tall and short bars). Full bars represent “1s” and half bars represent “0s.” The geometry of the bars and their proper location are covered in the following sections and illustrations.

Code Characters

Each code character is made up of five bars that represent a single numeric digit. Specific combinations of two full bars and three half bars represent the digits 0 through 9. Only the 10 combinations shown below are valid code characters. Note that they represent all possible combinations of two full bars and three half bars. This feature is central to the error-recovery of POSTNET because a combination of five bars containing other than two full and three half bars will be interpreted as an error by the system.

Bar Position Weights

Except for zero, the numeric value of each valid combination of five bars can be determined by adding the “weights” of the two positions occupied by the full bars (“1s”). From left to right, the bar positions are weighted 7, 4, 2, 1, and 0. For example, the combination 01010 contains a full bar in the second (weight 4) and fourth (weight 1) positions. Adding 4 and 1 yields 5, which is the assigned value of this combination. The only exception is the combination 11000, which has a total weight of 11 but is assigned a value of zero.

From left to right, the bar positions are weighted 7, 4, 2, 1, and 0.

Numeric Value	Bar Position Weights	
	Binary	Barcode
	74210	74210
1	00011	
2	00101	
3	00110	
4	01001	
5	01010	
6	01100	
7	10001	
8	10010	
9	10100	
0	11000	

Bar Spacing (Pitch)

Measured over any 1/2 inch (0.500 inch), the horizontal spacing of the bars must be 22 ± 2 bars per inch and the pitch (a bar and a space) must average at least 0.0416 inch but no more than 0.050 inch. The clear vertical space between bars must not be less than 0.012 inch or more than 0.040 inch. Absolute barcode length should never be less than the minimum nor greater than the maximum defined below for a 5-digit ZIP Code, 9-digit ZIP+4 code, or 11-digit delivery point code.

Barcode Dimensions

Five-Digit ZIP Code (32 Bars—A Field)

The distance from the leading edge of the 1st (leftmost) bar to the leading edge of the 32nd (rightmost) bar should be at least 1.245 inches. The distance from the leading edge of the 1st bar to the trailing edge of the 32nd bar should not exceed 1.625 inches.

Nine-Digit ZIP+4 Code (52 Bars—C Field)

The distance from the leading edge of the 1st (leftmost) bar to the leading edge of the 52nd (rightmost) bar should be at least 2.075 inches. The distance from the leading edge of the 1st bar to the trailing edge of the 52nd bar should not exceed 2.625 inches.

Eleven-Digit Delivery Point Code (62 Bars—C Prime Field)

The distance from the leading edge of the 1st (leftmost) bar to the leading edge of the 62nd (rightmost) bar should be at least 2.495 inches. The distance from the leading edge of the 1st bar to the trailing edge of the 62nd bar should not exceed 3.125 inches.

Barcode Locations

The POSTNET barcode, applied by postal customers, may be printed just about anywhere on the address side of the mailpiece that is at least 1/8 inch (0.125 inch) from any edge.

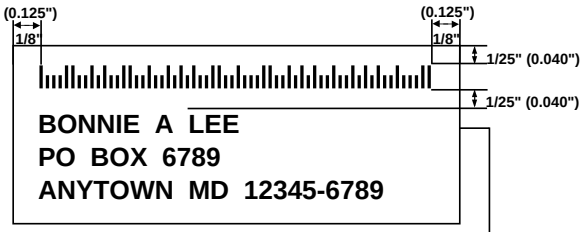
The preferred location for printing of the POSTNET barcode is in the upper portion of the address above the recipient's name.

The preferred location is in the upper portion of the address, above the recipient's name as shown in Example A on the next page. The barcode may also be printed below the city, state, and ZIP Code line of the address as shown in Example B. If a keyline or optional endorsement line is present, the preferred location is above the recipient's name but below keyline or optional endorsement lines as shown in Example C. If preferred, however, the barcode may be above that information as shown in Example D.

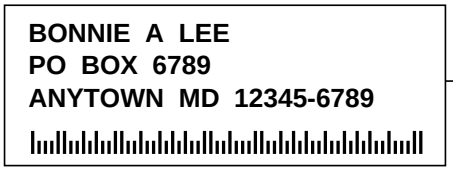
The POSTNET barcode may not be applied between the name of the recipient and the city, state, and ZIP Code line of the address (that is, the barcode may not be placed between any lines of the delivery address). Page 24 also provides specifications for the clearance needed between address block barcodes and window edges or other printing.

Postal customers may print POSTNET barcodes directly onto flats or labels attached to flats.

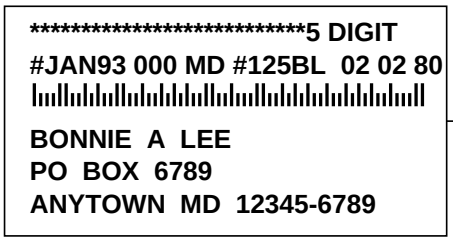
Example A
Above Address
(Preferred)



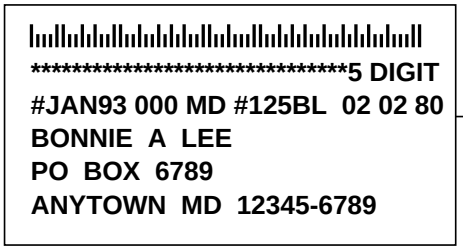
Example B
Below Address
(Acceptable)



Example C
Below Optional Endorsement Line and/or Keyline Information
(Preferred)



Example D
Above Optional Endorsement Line and/or Keyline Information
(Acceptable)



Maintain 1/8" (0.125") spacing between left and right edges of barcode and window edges, label edges, or other printing. Maintain 1/25" (0.040") between top and bottom of barcode and any window edges, label edges, or other printing. The barcode should be 5/8" (0.625") or less from the top or bottom line of the address.

(Not Drawn to Scale)

Bar Dimensions

The individual bars making up the POSTNET barcode should be printed within the dimensional tolerances shown on page 28. Edges of the bars should completely cover the minimum bar outlines but not exceed the maximum outlines.

Barcodes for flats have no combined tilt requirement.

Barcode Layout

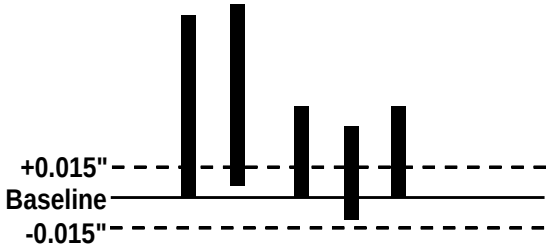
General Rules

Unlike letter mail, flats have no combined tilt requirement for barcodes. There are, however, requirements for baseline shift and rotational skew.

Baseline Shift

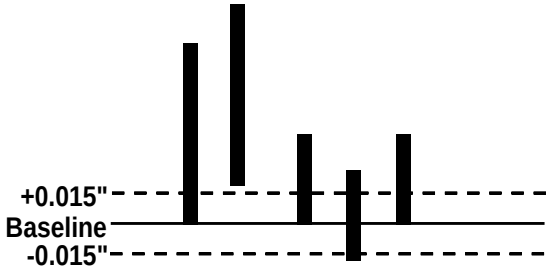
The bottoms of all bars in each field must not vary more than ± 0.015 inch from bar to bar, when measured from the baseline (bottom) of the barcode.

Acceptable Baseline Shift



(Not Drawn to Scale)

Unacceptable Baseline Shift

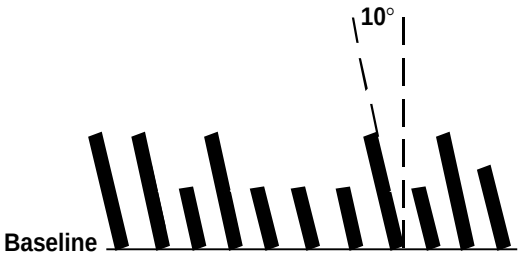


(Not Drawn to Scale)

Rotational Skew

The individual bar slant must not vary more than ±10 degrees when measured from a perpendicular to the baseline of the barcode. There is no positional skew requirement.

Bar Rotation



(Not Drawn to Scale)

Barcode Printing Guidelines

Background Reflectance

A background reflectance of 50% in the red and 45% in the green portions of the optical spectrum is necessary for barcode processing.

The area where the barcode is located should be uniform in color and produce a minimum reflectance of 50% in the red and 45% in the green portions of the optical spectrum, when measured with a Postal Service envelope reflectance meter or equivalent. Although a white background is preferred, pastels and a number of other light colors are acceptable.

Print Reflectance Difference

A print reflectance difference of at least 30% in the red and green portions of the optical spectrum is necessary for reading POSTNET barcodes.

The barcode reader responds to the difference between light reflected from the printed barcode and the background. This is defined as print reflectance difference (PRD). A PRD of at least 30% in the red and the green portions of the optical spectrum is necessary for reading POSTNET barcodes. PRD can be measured with a Postal Service envelope reflectance meter or its equivalent. PRD is further defined in Appendix A.

The barcode reader responds best when the barcode is printed in black ink on a white background. Other color combinations may be acceptable if the minimum PRD of 30% is met. Questionable color combinations may be referred to your Postal Service mailpiece design analyst for testing.

Overinking

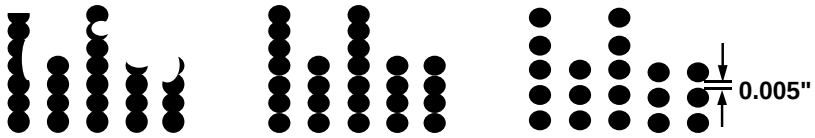
Overinking (see below), which causes any bar to exceed its maximum dimensions, can prevent successful barcode interpretation. Consequently, excessive or extraneous ink should not cause any bar to exceed the recommended height or width limits shown on page 28.

Extraneous Ink

Voids and Overspacing

A void, which reduces any bar to less than its minimum dimensions, can interfere with barcode interpretation. In the example shown below, the voids have been created by a malfunctioning dot matrix printer. Ideally, dot matrix printing should yield dots that touch or overlap. If not touching, the space between dots should not exceed 0.005 inch.

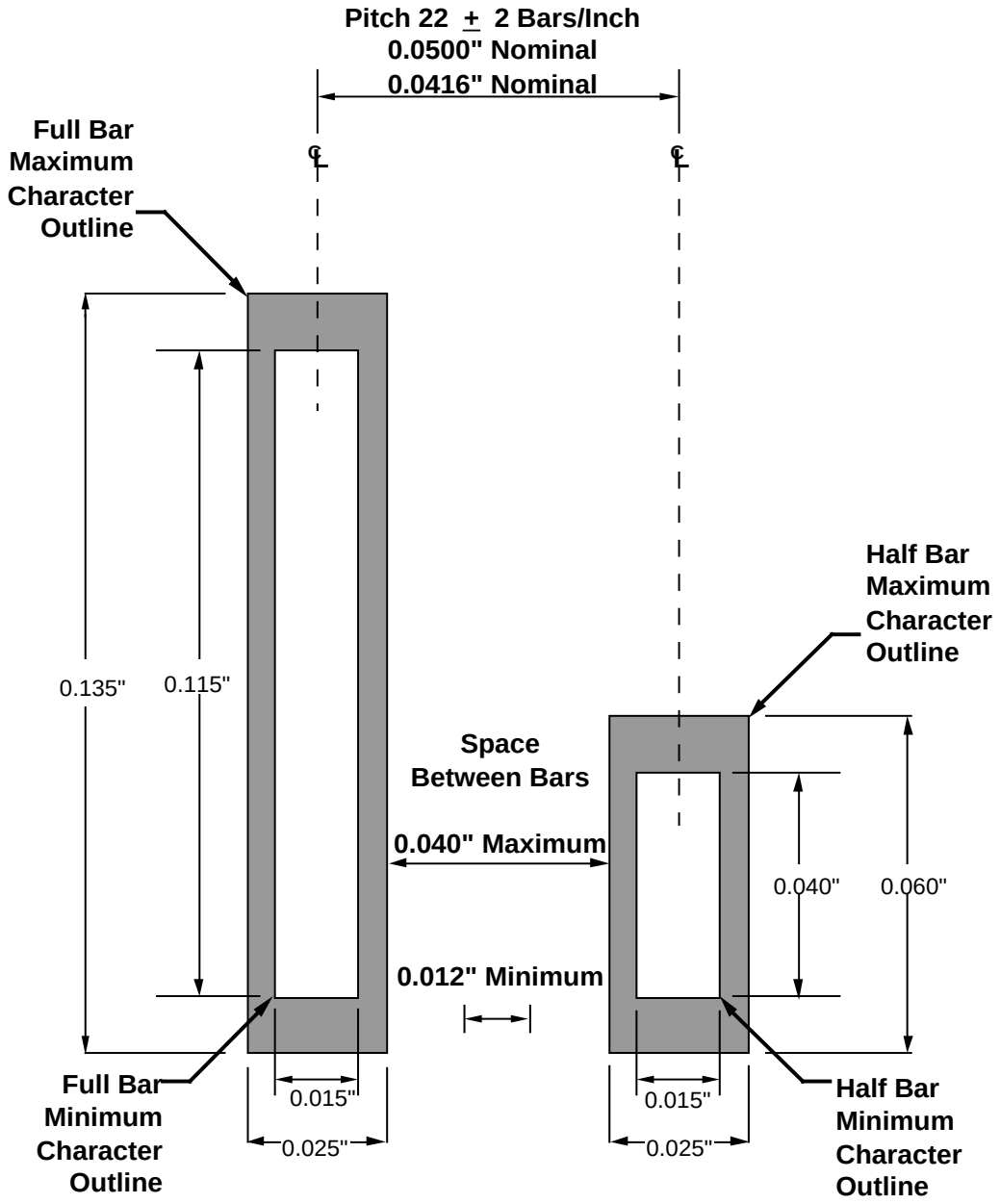
Voids *Preferred* *Maximum Spacing*



Extraneous Matter

Background patterns, envelope insert “show-through,” and any other printing within the clear areas surrounding the address block barcode shown on page 24 should be limited to a maximum print contrast ratio (PCR) of 15%. A PCR exceeding 15% can interfere with barcode recognition.

POSTNET Barcode Specifications



Full Bar

Height: **0.125" ± 0.010"**
Width: **0.020" ± 0.005"**

Half Bar

Height: **0.050" ± 0.010"**
Width: **0.020" ± 0.005"**

(Not Drawn to Scale)

Appendix A — Ink/Paper Definitions

This appendix provides definitions and formulas for determining the reflectance of mailpiece backgrounds and printing ink, print contrast ratio (PCR), and print reflectance difference (PRD). Values for these parameters are always less than 1. They are sometimes expressed in decimal fractions (e.g., 0.65) and sometimes in percentages (e.g., 65%). These two forms are essentially identical and interchangeable. Percentages are used in this publication. All parameters are measured as shown in Appendix B.

Reflectance

The symbol R is used for reflectance. Only diffuse (scattered) reflectance is of interest. It represents the percentage of incident light diffusely reflected by the material in question. A perfectly reflecting surface would have a reflectance of 100%, whereas a surface that reflected only half of the incident light would have a reflectance of 50%.

Print Reflectance Difference

$PRD = (R_w - R_p) \times 100$

where R_w is the reflectance of the background

(e.g., envelope or card)

where R_p is the reflectance of the ink

(e.g., character stroke)

Print Contrast Ratio

$$PCR = \frac{R_w - R_p}{R_w} \times 10$$

where R_w and R_p are defined as above

Appendix B — Ink/Paper Measurement

This appendix is for mailers who have instruments capable of measuring optical reflectance and contrast.

Instrument Calibration Standards

The measurements here apply only to diffuse reflectance. A perfectly reflecting, perfectly diffusing surface has a reflectance of 100%. This is the reference or basis for reflectance measurements. Calibrated pressed barium sulfate ($BaSO_4$) or magnesium oxide (MgO) is a suitable reference standard for instrument calibration to indicate 100% reflectance for a white surface.

Carbon black or other black backing such as black velvet that reflects less than 1% light may be used as a suitable reference standard for zero reflectance. Instruments should be calibrated according to manufacturer's instructions using either the above primary standards or the secondary standards supplied with the measurement equipment.

Instrumentation

Measurements may be made using the Postal Service-approved envelope reflectance meter. If other instruments are used, they should provide the appropriate spectral response characteristics in the red and the green portions of the optical spectrum shown in the illustration on page 31 and described below.

Area Resolution

For measurements associated with POSTNET barcode functions, the effective area being measured by the envelope reflectance meter (ERM-2) is 6 mils (0.006 inch) by 10 mils (0.010 inch).

Reflectance and Contrast Measurements

Reflectance and contrast measurements on POSTNET bars and potential interference should be made in the red and the green portions of the optical spectrum as follows:

1. Make sure that auto-calibration has been performed on the instrument and the mode switch is in the "Operate" position. (The display should now read "00% 00% 00% .00 inches.")

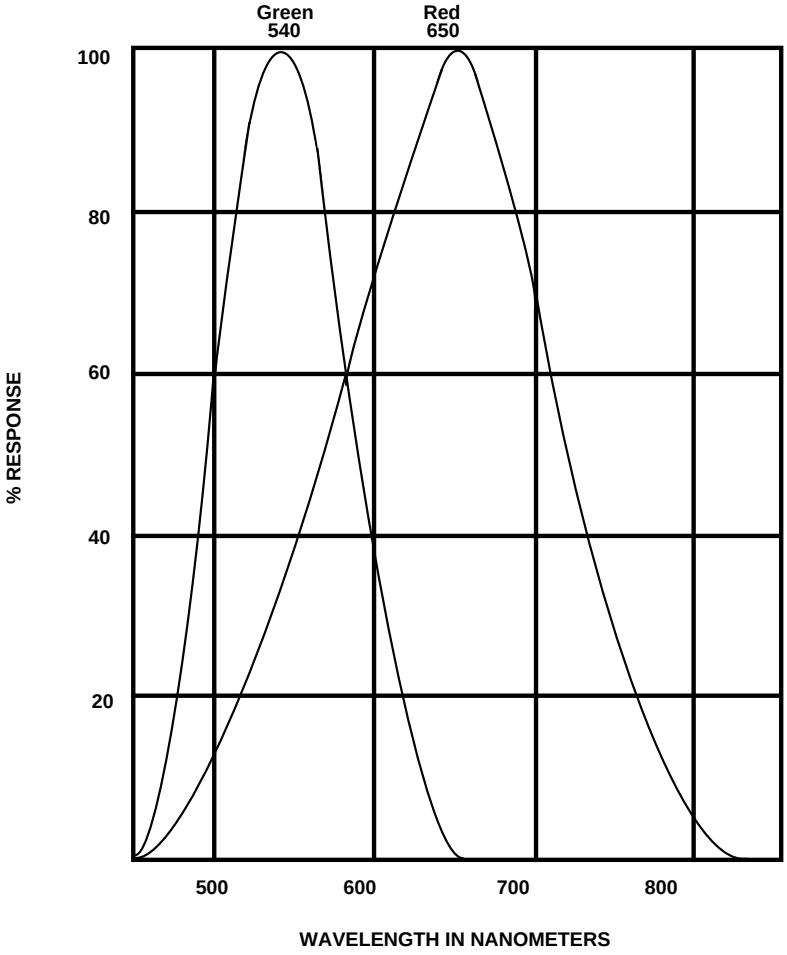
2. Place the sample switch in the "Paper" position. Position the mailpiece in the mail slot of the instrument so that the paper background is centered within the reticle pattern on the view screen. Place the sample switch in the "Hold"

position. The unit locks the last value displayed into its internal memory and uses this value for all future PRD and PCR calculations. This value is also locked into the display readout.

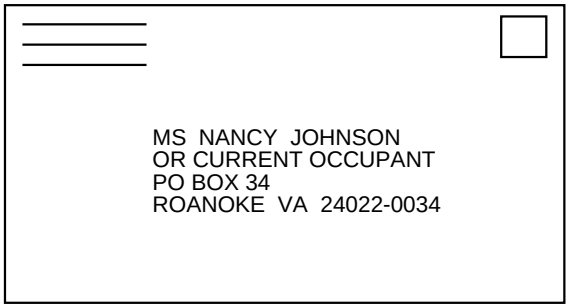
3. Place the sample switch in the “Ink” position and move the mailpiece in the mail slot so that a portion of the character is centered within the reticle pattern on the view screen. Place the same switch in the “Hold” position. This value is also locked into the unit’s internal memory for all future PRD and PCR calculations. This value is also locked into the display readout.

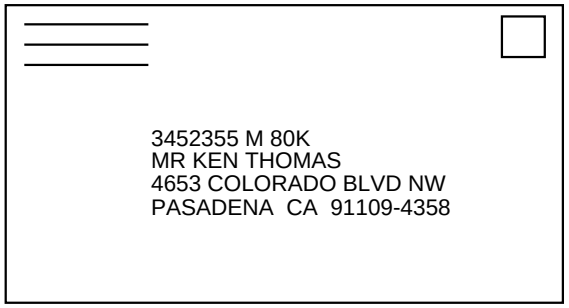
4. With the sample switch in the “Hold” position, all reflectance parameters are held on the display. By toggling the channel switch, the operator can obtain the corresponding values for the red spectrum channel.

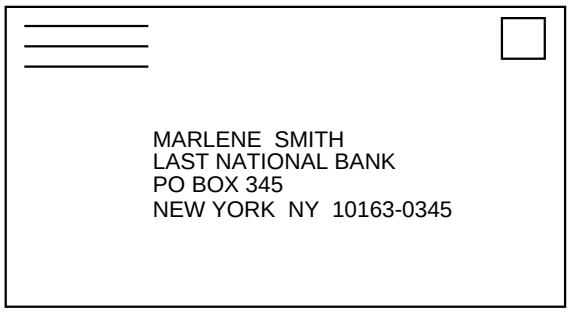
Spectral Response Curves

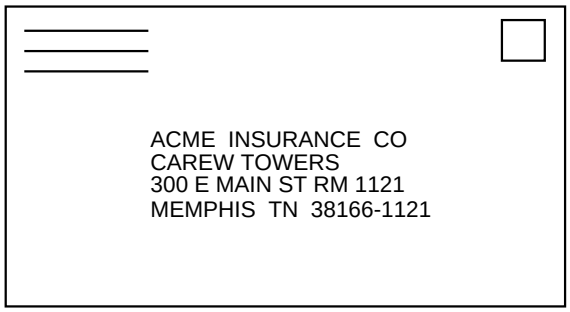


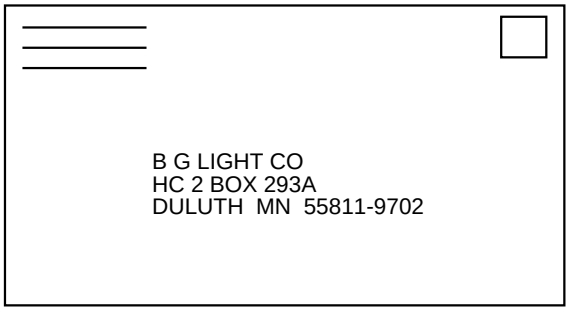
Appendix C — Sample Address Formats

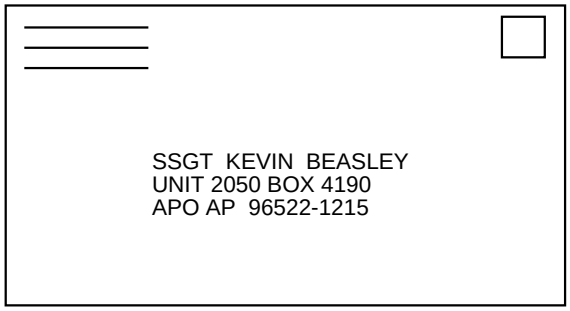


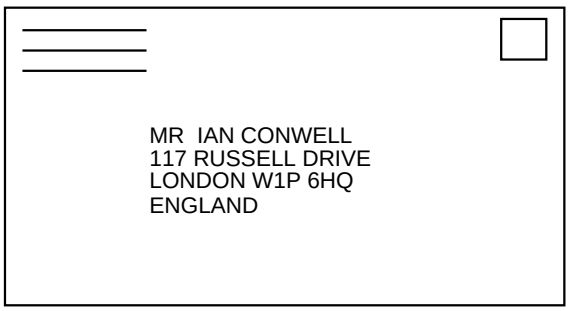


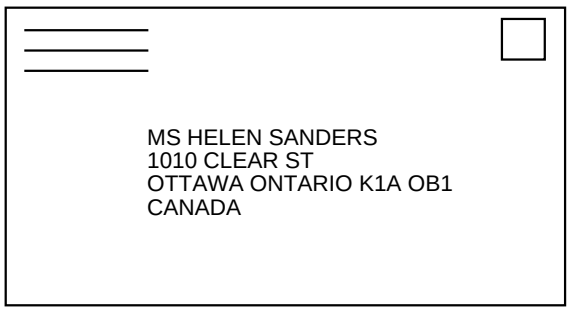












Appendix D — Standard Address Abbreviations

Two-Letter State and Possession

Alabama	AL
Alaska	AK
American Samoa	AS
Arizona	AZ
Arkansas	AR
California	CA
Colorado	CO
Connecticut	CT
Delaware	DE
District of Columbia	DC
Federated States of Micronesia	FM
Florida	FL
Georgia	GA
Guam	GU
Hawaii	HI
Idaho	ID
Illinois	IL
Indiana	IN
Iowa	IA
Kansas	KS
Kentucky	KY
Louisiana	LA
Maine	ME
Marshall Islands	MH
Maryland	MD
Massachusetts	MA
Michigan	MI
Minnesota	MN
Mississippi	MS
Missouri	MO
Montana	MT
Nebraska	NE
Nevada	NV
New Hampshire	NH
New Jersey	NJ
New Mexico	NM
New York	NY
North Carolina	NC
North Dakota	ND
Northern Mariana Islands	MP
Ohio	OH
Oklahoma	OK
Oregon	OR
Palau	PW
Pennsylvania	PA
Puerto Rico	PR
Rhode Island	RI
South Carolina	SC
South Dakota	SD
Tennessee	TN
Texas	TX
Utah	UT
Vermont	VT
Virgin Islands	VI
Virginia	VA
Washington	WA
West Virginia	WV
Wisconsin	WI
Wyoming	WY

Directionals

North	N
East	E
South	S
West	W
Northeast	NE
Southeast	SE
Southwest	SW
Northwest	NW

Secondary Address Unit Indicators

Apartment	APT
Building	BLDG
Floor	FL
Suite	STE
Room	RM
Department	DEPT

Street Designators (Suffixes)

Alley	ALY
Annex	ANX
Arcade	ARC
Avenue	AVE
Bayou	BYU
Beach	BCH
Bend	BND
Bluff	BLF
Bottom	BTM
Boulevard	BLVD
Branch	BR
Bridge	BRG
Brook	BRK
Burg	BG
Bypass	BYP
Camp	CP
Canyon	CYN
Cape	CPE
Causeway	CSWY
Center	CTR
Circle	CIR
Cliffs	CLFS
Club	CLB
Corner	COR
Corners	CORS
Course	CRSE
Court	CT
Courts	CTS
Cove	CV
Creek	CRK
Crescent	CRES
Crossing	XING
Dale	DL
Dam	DM
Divide	DV
Drive	DR
Estates	EST
Expressway	EXPY
Extension	EXT
Fall	FALL
Falls	FLS
Ferry	FRY
Field	FLD
Fields	FLDS
Flats	FLT
Ford	FRD
Forest	FRST
Forge	FRG
Fork	FRK
Forks	FRKS
Fort	FT
Freeway	FWY
Gardens	GDNS
Gateway	GTWY
Glen	GLN
Green	GRN
Grove	GRV
Harbor	HBR
Haven	HVN
Heights	HTS
Highway	HWY
Hill	HL
Hills	HLS
Hollow	HOLW
Inlet	INLT
Island	IS
Islands	ISS
Isle	ISLE
Junction	JCT
Key	KY
Knolls	KNLS
Lake	LK
Lakes	LKS
Landing	LNDG
Lane	LN
Light	LGT
Loaf	LF
Locks	LCKS
Lodge	LDG
Loop	LOOP
Mall	MALL

Street Designators (Suffixes) cont.

Manor	MNR
Meadows	MDWS
Mill	ML
Mills	MLS
Mission	MSN
Mount	MT
Mountain	MTN
Neck	NCK
Orchard	ORCH
Oval	OVAL
Park	PARK
Parkway	PKY
Pass	PASS
Path	PATH
Pike	PIKE
Pines	PNES
Place	PL
Plain	PLN
Plains	PLNS
Plaza	PLZ
Point	PT
Port	PRT
Prairie	PR
Radial	RADL
Ranch	RNCH
Rapids	RPDS
Rest	RST
Ridge	RDG
River	RIV
Road	RD
Row	ROW
Run	RUN
Shoal	SHL
Shoals	SHLS
Shore	SHR
Shores	SHRS
Spring	SPG
Springs	SPGS
Spur	SPUR
Square	SQ
Station	STA
Stravenue	STRA
Stream	STRM
Street	ST
Summit	SMT
Terrace	TER
Trace	TRCE
Track	TRAK
Trail	TRL
Trailer	TRLR
Tunnel	TUNL
Turnpike	TPKE
Union	UN
Valley	VLY
Viaduct	VIA
View	VW
Village	VLG
Ville	VL
Vista	VIS
Walk	WALK
Way	WAY
Wells	WLS

Appendix E — Glossary

aspect ratio—the dimension of a mailpiece expressed as a ratio of height to length. (The length is the direction parallel to the address as read; the height is perpendicular to the length.)

BCR—barcode reader.

BCS—barcode sorter.

delivery point barcode (DPBC)—a ZIP+4 barcode containing two additional digits (10 additional bars) that designate a specific delivery point.

***Domestic Mail Manual* (DMM)—**the Postal Service manual containing all regulations for domestic mail services.

FSM—flat sorting machine.

indicia—plural of indicium. Imprinted designations used on mailpieces denoting method of postage payment.

insert—a letter or other item placed in an envelope for mailing.

***International Mail Manual* (IMM)—**the Postal Service manual containing all regulations for international mail services.

nanometer (nm)—a unit of wavelength (when applied to light) of 10^{-9} meters (1 billionth of a meter).

OCR—optical character reader.

pitch—the center-to-center spacing between two adjacent objects such as characters in a line of characters, bars in a barcode, or lines in an address block.

POSTNET—POSTal Numeric Encoding Technique. The barcode used to encode ZIP Code information on letter and flat mail.

print contrast ratio (PCR)—print reflectance difference divided by background reflectance, expressed as a percentage.

print reflectance difference (PRD)—background reflectance minus print reflectance, expressed as a percentage.

proportional spacing—the spacing of characters in a line where the space occupied by a character is proportional to the width of that character, as opposed to fixed spacing where every character occupies the same amount of space regardless of its actual width.

skew—the misalignment or slant of a character, bar, line of characters, or barcode with respect to the bottom or top edge of the mailpiece.

ZIP+4—a 9-digit numeric code incorporating the original 5-digit ZIP Code, a hyphen, and 4 additional digits. The first 5 digits identify the delivery office. The 4-digit add-on identifies a specific delivery segment such as a city block face, a floor of a building, a department within a firm, a group of post office boxes, etc.

Appendix F — Decimal Equivalents of Fractional Inches

Eighths (1/8s)

1/8	=	0.125
2/8 (1/4)	=	0.250
3/8	=	0.375
4/8 (1/2)	=	0.500
5/8	=	0.625
6/8 (3/4)	=	0.750
7/8	=	0.875

Sixteenths (1/16s)

1/16	=	0.0625
3/16	=	0.1875
5/16	=	0.3125
7/16	=	0.4375
9/16	=	0.5625
11/16	=	0.6875
13/16	=	0.8125
15/16	=	0.9375

Twenty-Fifths (1/25s)

1/25	=	0.040
2/25	=	0.080
3/25	=	0.120
4/25	=	0.160
6/25	=	0.240
7/25	=	0.280
8/25	=	0.320
9/25	=	0.360
11/25	=	0.440
12/25	=	0.480
13/25	=	0.520
14/25	=	0.560
16/25	=	0.640
17/25	=	0.680
18/25	=	0.720
19/25	=	0.760
21/25	=	0.840
22/25	=	0.880
23/25	=	0.920
24/25	=	0.960

Thirty-Seconds (1/32s)

1/32	=	0.03125
3/32	=	0.09375
5/32	=	0.15625
7/32	=	0.21875
9/32	=	0.28125
11/32	=	0.34375
13/32	=	0.40625
15/32	=	0.46875
17/32	=	0.53125
19/32	=	0.59375
21/32	=	0.65625
23/32	=	0.71875
25/32	=	0.78125
27/32	=	0.84375
29/32	=	0.90625
31/32	=	0.96875

Appendix G — Postal Business Centers

Alabama

POSTAL BUSINESS CENTER
351 24TH ST N
BIRMINGHAM AL 35203-9691
(205) 323-6510 / Fax: (205) 521-0046
ZIPs served: 350-368

Alaska

POSTAL BUSINESS CENTER
3201 C ST STE 505
ANCHORAGE AK 99503-3934
(907) 564-2823 / Fax: (907) 564-2882
ZIPs served: 995-999

Arizona

POSTAL BUSINESS CENTER
4949 E VAN BUREN ST RM 8
PHOENIX AZ 85026-9605
(602) 225-5454 / Fax: (602) 225-5432
ZIPs served: 850, 852, 853, 855-857, 859, 860, 863, 864

Arkansas

POSTAL BUSINESS CENTER
420 NATURAL RESOURCES DR
LITTLE ROCK AR 72205-9996
(501) 228-4300 / Fax: (501) 228-4299
ZIPs served: 716-729

California

POSTAL BUSINESS CENTER
2300 REDONDO AVE
LONG BEACH CA 90809-9694
(310) 494-2301 / Fax: (310) 498-7506
ZIPs served: 902-908

POSTAL BUSINESS CENTER
7001 S CENTRAL AVE RM 264
LOS ANGELES CA 90052-9602
(213) 586-1843 / Fax: (213) 586-1831
ZIP served: 900

POSTAL BUSINESS CENTER
1675 7TH ST RM 120
OAKLAND CA 94615-9641
(510) 874-8600 / Fax: (510) 832-4024
ZIPs served: 945-948

POSTAL BUSINESS CENTER
2035 HURLEY WAY STE 200
SACRAMENTO CA 95825-3209
(916) 923-4357 / Fax: (916) 923-4381
ZIPs served: 942, 952, 953, 956-960

POSTAL BUSINESS CENTER
11251 RANCHO CARMEL DR RM 266
SAN DIEGO CA 92199-9606
(619) 674-0400 / Fax: (619) 674-0055
ZIPs served: 919-925

POSTAL BUSINESS CENTER
PO BOX 7821
SAN FRANCISCO CA 94120-7821
(415) 536-6565 / Fax: (415) 536-6450
ZIPs served: 940, 941, 943, 944, 949, 954, 955, 962-966

POSTAL BUSINESS CENTER
PO BOX 50014
SAN JOSE CA 95150-0014
(408) 723-6262 / Fax: (408) 723-6272
ZIPs served: 932, 933, 936-939, 950, 951

POSTAL BUSINESS CENTER
3101 W SUNFLOWER AVE
SANTA ANA CA 92799-9323
(714) 662-6213 / Fax: (714) 556-1492
ZIPs served: 917, 918, 926-928

POSTAL BUSINESS CENTER
15701 SHERMAN WAY
VAN NUYS CA 91409-9680
(818) 374-4943 / Fax: (818) 787-2941
ZIPs served: 910-916, 930, 931, 934, 935

Colorado

POSTAL BUSINESS CENTER
1745 STOUT ST STE 101
DENVER CO 80266-9617
(303) 297-6118 / Fax: (303) 391-5076
ZIPs served: 800-816, 820-831

Connecticut

POSTAL BUSINESS CENTER
141 WESTON ST
HARTFORD CT 06101-9631
(203) 524-6494 / Fax: (203) 524-6446
ZIPs served: 060-069

Delaware *(see New Jersey)*

District of Columbia

POSTAL BUSINESS CENTER
8455 COLESVILLE RD STE 950
SILVER SPRING MD 20910-3319
(301) 565-2177 / Fax: (301) 565-2933
ZIPs served: 200, 202-209

Florida

POSTAL BUSINESS CENTER
1900 W OAKLAND PARK BLVD RM 211
FORT LAUDERDALE FL 33310-9600
(305) 527-6981 / Fax: (305) 527-6985
ZIP served: 333

POSTAL BUSINESS CENTER
11250 PHILLIPS INDUSTRIAL BLVD E
JACKSONVILLE FL 32256-3000
(904) 260-8101 / Fax: (904) 260-9015
ZIPs served: 320-326, 344

POSTAL BUSINESS CENTER
2200 NW 72ND AVE RM 528
MIAMI FL 33152-9600
(305) 470-0803 / Fax: (305) 470-0799
ZIPs served: 330-332, 340

POSTAL BUSINESS CENTER
10401 TRADEPORT DR
ORLANDO FL 32862-8901
(407) 826-5602 / Fax: (407) 826-5679
ZIPs served: 327-329, 347

POSTAL BUSINESS CENTER
4107 N HIMES AVE STE 203
TAMPA FL 33607-6600
(813) 871-6245 / Fax: (813) 871-2021
ZIPs served: 335-339, 342, 346

POSTAL BUSINESS CENTER
3200 SUMMIT BLVD RM 111
W PALM BEACH FL 33406-9602
(407) 697-2180 / Fax: (407) 697-2125
ZIPs served: 334, 349

Georgia

POSTAL BUSINESS CENTER
PO BOX 20777
MACON GA 31205-0777
(912) 784-3917 / Fax: (912) 784-3916
ZIPs served: 310, 312, 316-319

POSTAL BUSINESS CENTER
PO BOX 599332
NORTH METRO GA 30159-9332
(404) 717-3440 / Fax: (404) 717-3629
ZIPs served: 300-303, 305, 306, 311

POSTAL BUSINESS CENTER
2 N FAHM ST
SAVANNAH GA 31402-9600
(912) 235-4591 / Fax: (912) 234-9335
ZIPs served: 298, 299, 304, 308, 309, 313-315

Hawaii

POSTAL BUSINESS CENTER
3600 AOLELE ST RM 106
HONOLULU HI 96820-9623
(808) 423-3761 / Fax: (808) 423-3966
ZIPs served: 967-969

Idaho *(see Washington)*

Illinois

POSTAL BUSINESS CENTER
3900 GABRIELLE DR
AURORA IL 60599-9614
(708) 978-4455 / Fax: (708) 978-4354
ZIPs served: 604, 605, 609, 613-619, 625-627

POSTAL BUSINESS CENTER
500 E FULLERTON AVE
CAROL STREAM IL 60199-9661
(708) 260-5511 / Fax: (708) 260-5524
ZIPs served: 600-603, 610, 611

POSTAL BUSINESS CENTER
433 W VAN BUREN ST RM 108
CHICAGO IL 60607-9601
(312) 765-4215 / Fax: (312) 765-3984
ZIPs served: 606, 607

Indiana

POSTAL BUSINESS CENTER
125 W SOUTH ST
INDIANAPOLIS IN 46206-9661
(317) 464-6010 / Fax: (317) 464-6266
ZIPs served: 460-469, 472-475, 478, 479

Iowa

POSTAL BUSINESS CENTER
PO BOX 189996
DES MOINES IA 50318-9605
(515) 251-2336 / Fax: (515) 251-2052
ZIPs served: 500-514, 520-528, 612

Kansas *(see Nebraska)*

Kentucky

POSTAL BUSINESS CENTER
PO BOX 31660
LOUISVILLE KY 40231-9660
(502) 473-4200 / Fax: (502) 454-1744
ZIPs served: 400-418, 420-427, 471, 476, 477

Louisiana

POSTAL BUSINESS CENTER
701 LOYOLA AVE RM 1103
NEW ORLEANS LA 70113-9680
(504) 589-1366 / Fax: (504) 589-1328
ZIPs served: 700, 701, 703-708, 710-714

Maine

POSTAL BUSINESS CENTER
125 FOREST AVE
PORTLAND ME 04101-9600
(207) 871-8567 / Fax: (207) 871-8401
ZIPs served: 039-049

Maryland

POSTAL BUSINESS CENTER
900 E FAYETTE ST RM 502
BALTIMORE MD 21233-9661
(410) 347-4358 / Fax: (410) 347-4515
ZIPs served: 210-212, 214-219

Massachusetts

POSTAL BUSINESS CENTER
25 DORCHESTER AVE RM 1000
BOSTON MA 02205-9602
(617) 654-5725 / Fax: (617) 654-5829
ZIPs served: 021, 022

POSTAL BUSINESS CENTER
1883 MAIN ST
SPRINGFIELD MA 01101-9600
(413) 731-0306 / Fax: (413) 731-0330
ZIPs served: 010-013, 050-059

POSTAL BUSINESS CENTER
PO BOX 2236
WOBURN MA 01888-0336
(617) 938-1450 / Fax: (617) 938-5827
ZIPs served: 018, 019, 01730, 01741, 01742

POSTAL BUSINESS CENTER
4 EAST CENTRAL ST
WORCESTER MA 01613-9602
(508) 795-3608 / Fax: (508) 795-3606
ZIPs served: 014-017

Michigan

POSTAL BUSINESS CENTER
PO BOX 9630
BIRMINGHAM MI 48009-9630
(810) 546-1321 / Fax: (810) 901-4515
ZIPs served: 480, 483

POSTAL BUSINESS CENTER
1927 ROSA PARKS BLVD
DETROIT MI 48216-9620
(313) 226-8600 / Fax: (313) 225-5496
ZIPs served: 481, 482

POSTAL BUSINESS CENTER
PO BOX 999661
GRAND RAPIDS MI 49599-9661
(616) 776-6161 / Fax: (616) 458-5830
ZIPs served: 484-497

Minnesota

POSTAL BUSINESS CENTER
100 S FIRST ST RM 119
MINNEAPOLIS MN 55401-9617
(612) 349-6360 / Fax: (612) 349-4410
ZIPs served: 540, 546-548, 550, 551, 553-564, 566

Mississippi

POSTAL BUSINESS CENTER
401 E SOUTH ST STE 100
JACKSON MS 39201-9825
(601) 360-2700 / Fax: (601) 360-2707
ZIPs served: 369, 386-397

Missouri

POSTAL BUSINESS CENTER
315 W PERSHING RD RM 104
KANSAS CITY MO 64108-9623
(816) 374-9513 / Fax: (816) 374-9192
ZIPs served: 636-641, 644-649, 654-658, 660-662, 667

POSTAL BUSINESS CENTER
2665 SCOTT AVE
ST LOUIS MO 63103-3048
(314) 534-2678 / Fax: (314) 534-4763
ZIPs served: 620, 622-624, 628-631, 633-635, 650-653

Montana

POSTAL BUSINESS CENTER
550 S 24TH ST W
BILLINGS MT 59102-6293
(406) 255-6432 / Fax: (406) 255-6433
ZIPs served: 590-595, 59715

POSTAL BUSINESS CENTER
1100 W KENT AVE
MISSOULA MT 59801-9625
(406) 329-2231 / Fax: (406) 329-2280
ZIPs served: 596-599

Nebraska

POSTAL BUSINESS CENTER
5303 N 91ST AVE
OMAHA NE 68134-9600
(402) 573-2100 / Fax: (402) 573-2131
ZIPs served: 515, 516, 664-666, 668-681, 683-693

Nevada

POSTAL BUSINESS CENTER
1001 E SUNSET RD RM 106
LAS VEGAS NV 89199-9605
(702) 361-9318 / Fax: (702) 361-9213
ZIPs served: 889-891, 893-895, 897, 898, 961

New Hampshire

POSTAL BUSINESS CENTER
955 GOFFS FALLS RD
MANCHESTER NH 03103-9671
(603) 644-3838 / Fax: (603) 644-3865
ZIPs served: 030-038

New Jersey

POSTAL BUSINESS CENTER
PO BOX 9001
BELLMAWR NJ 08099-9601
(609) 933-6000 / Fax: (609) 933-6006
ZIPs served: 080-084, 197-199

POSTAL BUSINESS CENTER
21 KILMER RD
EDISON NJ 08899-9610
(908) 777-0565 / Fax: (908) 777-0513
ZIPs served: 077-079, 085-089

POSTAL BUSINESS CENTER
100 EXECUTIVE DR STE 390
WEST ORANGE NJ 07052-9333
(201) 731-4866 / Fax: (201) 669-0489
ZIPs served: 070-076

New Mexico

POSTAL BUSINESS CENTER
1135 BROADWAY BLVD NE RM 108
ALBUQUERQUE NM 87101-9601
(505) 245-9480 / Fax: (505) 245-9804
ZIPs served: 865, 870-875, 877-884

New York

POSTAL BUSINESS CENTER
1770 CENTRAL AVE
ALBANY NY 12205-4753
(518) 869-6526 / Fax: (518) 869-3925
ZIPs served: 120-123, 128-139

POSTAL BUSINESS CENTER
1200 WILLIAM ST RM 100
BUFFALO NY 14240-9661
(716) 846-2581 / Fax: (716) 846-2586
ZIPs served: 140-143, 147

POSTAL BUSINESS CENTER
500 N SAW MILL RIVER RD
ELMSFORD NY 10523-9650
(914) 345-1237 / Fax: (914) 345-3451
ZIPs served: 105-109, 124-127

POSTAL BUSINESS CENTER
14202 20TH AVE RM 123B
FLUSHING NY 11351-9621
(718) 321-5700 / Fax: (718) 358-9196
ZIPs served: 103, 110-114, 116

POSTAL BUSINESS CENTER
PO BOX 7609
HAUPPAUGE NY 11760-9661
(516) 582-7600 / Fax: (516) 582-7596
ZIPs served: 115, 117-119

POSTAL BUSINESS CENTER
421 8TH AVE RM 4202H
NEW YORK NY 10199-9619
(212) 330-3809 / Fax: (212) 330-3234
ZIPs served: 100-102, 104

POSTAL BUSINESS CENTER
PO BOX 22908
ROCHESTER NY 14692-2908
(716) 272-7220 / Fax: (716) 272-5979
ZIPs served: 144-146, 148, 149

North Carolina

POSTAL BUSINESS CENTER
2901 S INTERSTATE 85 SERVICE RD
CHARLOTTE NC 28228-9975
(704) 393-4481 / Fax: (704) 393-4661
ZIPs served: 280-285, 287-289, 297

POSTAL BUSINESS CENTER
PO BOX 27499
GREENSBORO NC 27498-9661
(910) 665-9740 / Fax: (910) 665-9748
ZIPs served: 270-279, 286

North Dakota *(see South Dakota)*

Ohio

POSTAL BUSINESS CENTER
675 WOLF LEDGES PKY
AKRON OH 44309-9600
(216) 996-9721 / Fax: (216) 443-4587
ZIPs served: 434-436, 439, 442-449

POSTAL BUSINESS CENTER
990 DALTON AVE
CINCINNATI OH 45203-9601
(513) 723-9900 / Fax: (513) 684-5082
ZIPs served: 410, 450-455, 458, 470

POSTAL BUSINESS CENTER
2400 ORANGE AVE RM 23
CLEVELAND OH 44101-9604
(216) 443-4401 / Fax: (216) 443-4587
ZIPs served: 440, 441

POSTAL BUSINESS CENTER
850 TWIN RIVERS DR
COLUMBUS OH 43216-9601
(614) 469-4336 / Fax: (614) 469-4417
ZIPs served: 430-433, 437, 438, 456, 457

Oklahoma

POSTAL BUSINESS CENTER
7101 NW EXPRESSWAY ST STE 325
OKLAHOMA CITY OK 73132-1598
(405) 720-2675 / Fax: (405) 720-7120
ZIPs served: 730, 731, 734-741, 743-749

Oregon

POSTAL BUSINESS CENTER
PO BOX 4029
PORTLAND OR 97208-4029
(503) 294-2306 / Fax: (503) 294-2304
ZIPs served: 970-979, 986

Pennsylvania

POSTAL BUSINESS CENTER
1314 GRISWOLD PLZ
ERIE PA 16501-9631
(814) 878-0018 / Fax: (814) 878-0010
ZIPs served: 155, 157-168

POSTAL BUSINESS CENTER
1425 CROOKED HILL RD
HARRISBURG PA 17107-9601
(717) 257-2108 / Fax: (717) 257-2101
ZIPs served: 169-172, 177, 178, 180-188

POSTAL BUSINESS CENTER
1400 HARRISBURG PIKE
LANCASTER PA 17604-9601
(717) 396-6969 / Fax: (717) 396-7031
ZIPs served: 173-176, 179, 195, 196

POSTAL BUSINESS CENTER
PO BOX 13416
PHILADELPHIA PA 19101-3416
(215) 895-8046 / Fax: (215) 895-8041
ZIPs served: 190-192

POSTAL BUSINESS CENTER
1001 CALIFORNIA AVE RM 1007
PITTSBURGH PA 15290-9652
(412) 359-7601 / Fax: (412) 321-1953
ZIPs served: 150-154, 156, 260

POSTAL BUSINESS CENTER
1000 W VALLEY RD
SOUTHEASTERN PA 19399-9604
(610) 964-6441 / Fax: (610) 964-5414
ZIPs served: 189, 193, 194

Puerto Rico

POSTAL BUSINESS CENTER
585 FD ROOSEVELT AVE STE 216
SAN JUAN PR 00936-9623
(809) 782-3929 / Fax: (809) 273-1025
ZIPs served: 006-009

Rhode Island

POSTAL BUSINESS CENTER
24 CORLISS ST RM 355
PROVIDENCE RI 02904-9602
(401) 276-5038 / Fax: (401) 276-5089
ZIPs served: 020, 023-029

South Carolina

POSTAL BUSINESS CENTER
PO BOX 929641
COLUMBIA SC 29292-9641
(803) 926-6200 / Fax: (803) 926-6326
ZIPs served: 290-296

South Dakota

POSTAL BUSINESS CENTER
320 S 2ND AVE
SIOUX FALLS SD 57102-7574
(605) 357-5049 / Fax: (605) 357-5045
ZIPs served: 565, 567, 570-577, 580-588

Tennessee

POSTAL BUSINESS CENTER
PO BOX 3463
MEMPHIS TN 38173-0463
(901) 576-2035 / Fax: (901) 576-2039
ZIPs served: 380-383

POSTAL BUSINESS CENTER
525 ROYAL PKY RM 327
NASHVILLE TN 37229-9601
(615) 885-9399 / Fax: (615) 885-9214
ZIPs served: 307, 370-374, 376-379, 384, 385

Texas

POSTAL BUSINESS CENTER
951 W BETHEL RD
COPPELL TX 75099-9681
(214) 393-6701 / Fax: (214) 393-6664
ZIPs served: 750-759

POSTAL BUSINESS CENTER
4600 MARK IV PKY STE 260K
FORT WORTH TX 76161-9681
(817) 625-3600 / Fax: (817) 625-3304
ZIPs served: 739, 760-764, 768, 769, 790-796

POSTAL BUSINESS CENTER
PO BOX 25001
HOUSTON TX 77202-9610
(713) 226-3349 / Fax: (713) 226-3155
ZIPs served: 770-778

POSTAL BUSINESS CENTER
4600 ALDINE BENDER RD RM 227
HOUSTON TX 77315-9610
(713) 985-4108 / Fax: (713) 985-4194
ZIPs served: 770-778

POSTAL BUSINESS CENTER
10410 PERRIN BEITEL RD STE 1069
SAN ANTONIO TX 78284-9623
(210) 657-8578 / Fax: (210) 657-8463
ZIPs served: 733, 765-767, 779-789, 797-799

Utah

POSTAL BUSINESS CENTER
1760 W 2100 S
SALT LAKE CITY UT 84199-9625
(801) 974-2503 / Fax: (801) 975-7886
ZIPs served: 840, 841, 843-847

Vermont *(see Massachusetts)*

Virginia

POSTAL BUSINESS CENTER
8409 LEE HWY RM 1-B
MERRIFIELD VA 22081-9621
(703) 207-6800 / Fax: (703) 207-6825
ZIPs served: 201, 220-223, 226, 227

POSTAL BUSINESS CENTER
1801 BROOK RD RM 303
RICHMOND VA 23232-9610
(804) 775-6224 / Fax: (804) 775-6287
ZIPs served: 224, 225, 228-239, 244

Washington

POSTAL BUSINESS CENTER
PO BOX 24000
SEATTLE WA 98124-4000
(206) 625-7016 / Fax: (206) 467-9019
ZIPs served: 980-985, 988, 989

POSTAL BUSINESS CENTER
707 W MAIN AVE STE 600
SPOKANE WA 99299-9641
(509) 626-6733 / Fax: (509) 626-6918
ZIPs served: 832-838, 990-994

West Virginia

POSTAL BUSINESS CENTER
PO BOX 59661
CHARLESTON WV 25350-9661
(304) 340-4233 / Fax: (304) 340-2890
ZIPs served: 240-243, 245-259, 261-268

Wisconsin

POSTAL BUSINESS CENTER
PO BOX 14750
MADISON WI 53714-0750
(608) 246-1245 / Fax: (608) 246-1258
ZIPs served: 535, 537-539, 549

POSTAL BUSINESS CENTER
PO BOX 5008
MILWAUKEE WI 53201-5008
(414) 287-2522 / Fax: (414) 287-2518
ZIPs served: 498, 499, 530-532, 534, 541-545

Wyoming *(see Colorado)*