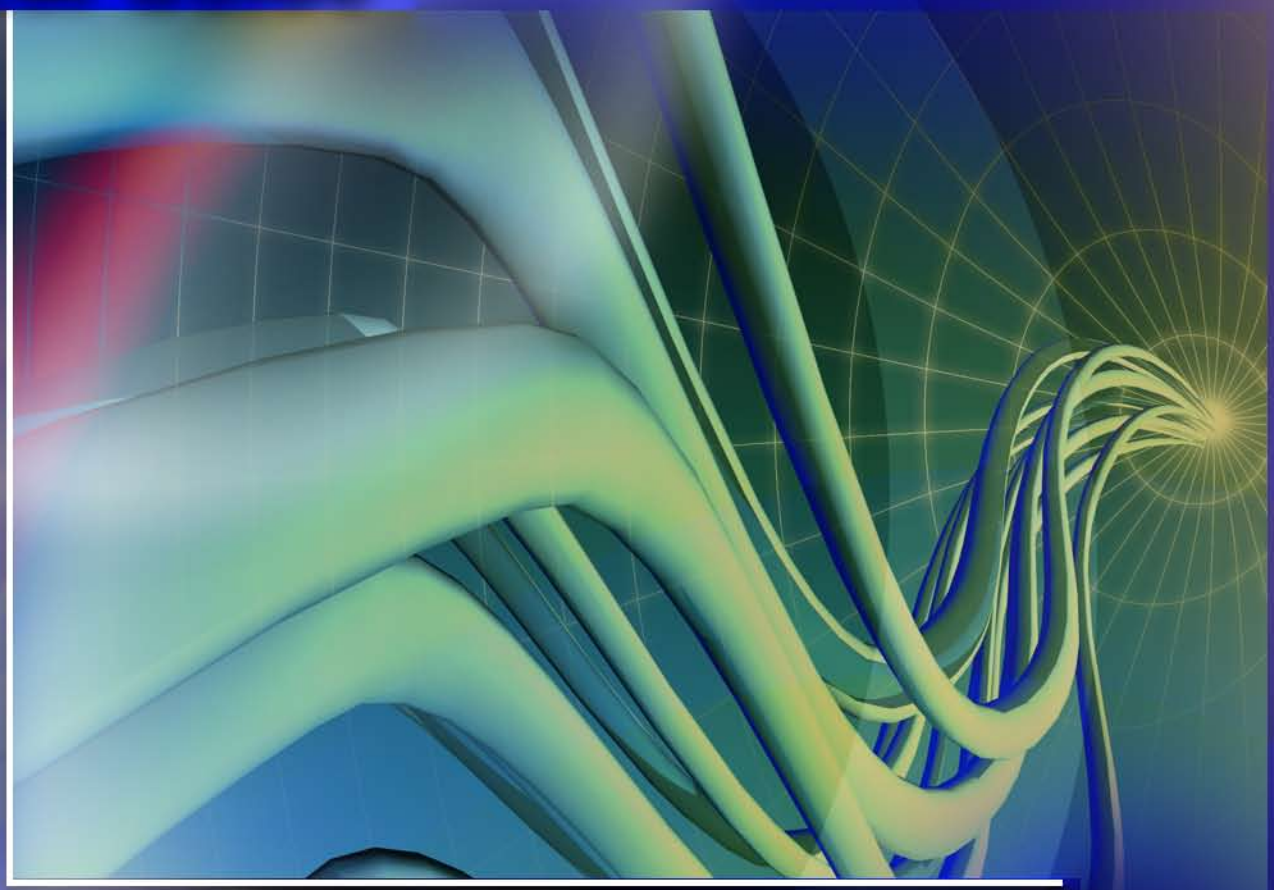
MASS™
Technical Guide



2011-2013 cycle

MLOCR
RVE
Encoding Station
Flats
Intelligent Mail® Barcode

UNITED STATES POSTAL SERVICE®

Purpose

MASS™ certification is a process designed for certification for Multiline Optical Character Readers (MLOCRs), Remote Video Encoding (RVE), Local Video Encoding (LVE), and encoding stations.

MASS is an extension of the CASS™ system. The MASS certification cycle is designed to evaluate the ability of MLOCRs and encoding stations to process address information and apply an accurate delivery point barcode (DPBC) to a mailpiece. The MASS certification cycle is comprised of the following phases:

1. Software manufacturer certification
2. Hardware manufacturer certification
3. User certification

Overview

All MASS tests are similar to CASS Stage II tests in that the performance of address-matching software and barcode application hardware is evaluated after it has processed a test file. If the required accuracy is achieved, MASS certification is issued.

MASS certification is mandatory for mailers using MLOCRs and encoding stations to print DPBCs on mailpieces submitted for mailing at automation rates. Customers must apply for MASS certification and meet the accuracy requirement for each required certification period to remain certified and avoid interrupted service to their customers.

Certification Requirements

Systems used for automation rates must be certified each required certification period. The Certification Department understands that customers who purchase a new system often have legitimate reasons for wanting to operate it immediately. To address this issue, a 45-day courtesy certification period is provided for systems that are newly installed, moved, relocated, upgraded or reassembled. The customer must notify the Certification Department within seven days of the installation by completing and submitting the MASS order form with the installation date to be eligible for the 45-day courtesy. During this 45-day window, the customer can use the system to produce and submit mail and qualify for automation rates after receiving clearance from the Certification Department. If the customer fails to receive MASS certification within this 45-day period, the system becomes ineligible to submit mail at automation rates after the 45th day.

Demo Machines

Machines used for demostration purposes will be eligible for a 30-day courtesy when notification via the MASS order process is received within seven days of the installation date.

The Certification Department must be notified by the customer and manufacturer in writing 10 days prior to the end of the 30-day courtesy period of the final disposition of the machine.

If the customer is going to keep the machine, fifteen (15) calendar days will be added to the 30-day courtesy period. This will allow the customer the standard 45-day courtesy for the new installations.

Failure to notify the Certification Department will result in notification to the BME that the machine is an uncertified machine.

Recertification

Recertification outside the normal annual testing periods may be required if changes are made to the following:

- the address-matching software utilized by the MLOCR
- the operating system (e.g. migrating from DOS to Windows NT) associated with the Address Recognition System and the Directory Retrieval System
- the camera configuration (e.g. from STD to RAF), including switching from a single to a dual camera configuration
- speed
- model

Change of Ownership: End User

If an MLOCR or an encoding station is sold or ownership is transferred, the new owner must notify the Certification Department in writing or email (cassman.ncsc@usps.gov). The notification must include the following:

- Equipment model number, serial number and MASS ID
- Previous owner's name and address
- New owner's name, address, phone number, and FAX number

If the machine is not physically relocated, a new MASS certificate may be issued. If the machine is physically relocated, the customer must follow the machine relocation guidelines. (See Certification Requirements)

Change of Ownership: Manufacturer

Manufacturers who enter into a purchase agreement with a customer to enhance or upgrade a machine that is currently supported by another manufacturer must provide to the Certification Department a Letter of Agreement signed by both parties. This is known as a hybrid system.

The Certification Department will not process any hybrid system requests for certification unless the Letter of Agreement has been signed by both parties and is on file with the Certification Department.

Hardware and Software Revisions, Upgrades, and Patches

If an MLOCR or encoding station software manufacturer issues a revision, upgrade, or patch to existing address-matching software or hardware, the manufacturer must submit written notification to the Certification Department before distributing the software or hardware. The written notification must include a brief description of the changes being made and the expected results of those changes. The Certification Department will evaluate the documentation and determine an appropriate course of action, which may include recertification of all users, a sample of the user base, hardware manufacturers only, or software manufacturers only. It is possible that no action will be taken following notification.

Fee Schedules

Annual Certification Fees

Fees for CASS and MASS certification were established to cover costs of developing and issuing testing material and administering the overall CASS and MASS program.

The fee schedule applies to MASS Certification Cycle N 2011-2013.

Fee-Based Certification	Aug/Oct (New Cycle)	NOV/ DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	After July 31, for Current Cycle
CASS	$200	$200	$200	$500	$500	$600	$700	$800	$900	$1,000
MASS MFG (MLOCR)		$500	$500	$500	$500	$500	$500	$500	$1,000	$1,500
MASS End-Users (MLOCR)								$500	$1,000	$1,500
MASS MFG (Encoder)		$300	$300	$300	$300	$300	$300	$300	$750	$1,000
MASS End-Users (Encoder)								$300	$750	$1,000

For CASS certification, customers will be billed based on the number of separate software configurations certified, not on the number of Stage II files ordered. In contrast, MASS customers will be billed for each test deck ordered (unless during a no-fee period) regardless of the number of decks needed to achieve certification. Billing procedures are coordinated with our Accounts Receivable Department. Customers are billed as certification is awarded.All certification test fees are payable within 30 days of the billing date.

Fee Policy for New, Upgraded or Transferred Machines

Prior to Certification Requirement Date

All systems must be MASS certified prior to the certification requirement date of each certification cycle. Systems will be charged half the regular scheduled fee when the applicant promptly notifies the MASS Department within seven days of the installation that a new, transferred or upgraded system has been received and installed. Notification is made by completing and submitting the MASS Order Form with the installation date.

After the Certification Requirement Date

New systems initially deployed from a MASS manufacturer to an end user after the certification requirement date will be charged a flat fee of $750 for MLOCRs and $500 for encoding stations. These fees also apply to any MLOCR or encoder transferred, upgraded or sold to another company. A new system is defined as barcoding equipment that is not in use or is not operational during the time for which certification is requested or during any previous MASS cycle. The applicant must

promptly notify the MASS Department within seven days of the installation by completing and submitting the MASS Order Form with the installation date.

The MASS Process

Certification

A ZIP+4 can only be assigned when the primary number DPV® confirms with confirmation codes Y, S and D. When an address does not DPV confirm (DPV confirmation code N), software can only return the 5-digit ZIP Code™, carrier route, LACS$^{Link®}$ indicator and return code, DPV/DSF$^{2®}$ return codes and footnotes, Suite$^{Link®}$ indicator and return code, and correct address components.

Manufacturers

Software providers must distribute current software and static data to hardware manufacturers. Static data must be used for all testing. Failure to use static data will result in test failure.

Manufacturers must notify the Certification Department of their intent to become MASS certified by providing a list or matrix that includes machine models, configuration and software name and version numbers, and manufacturer MASS identifier codes to be certified during the MASS cycle.

Manufacturers can test the highest speed of a specific model unless a new machine is being certified.

Manufacturers must provide detailed information when introducing a new machine. This will help the Certification Department identify the classification of a machine (i.e. MLOCR or encoder).

Note: The configuration is a 3-character alphabetic identifier associated with the model and camera/reader type of a machine. Configuration "STD" can be used when machines within the inventory use the same camera type or to represent one specific camera type.

Hardware Manufacturers Certification

1. Provide the matrix to the Certification Department
2. Complete the MASS Order Form and Terms and Conditions Document that is required with each new certification requirement period.
3. Process the test deck with static data on a representative model of the MLOCR or encoding station and return the test deck to the NCSC for evaluation.
4. When certification is achieved, the Certification Department issues a MASS certificate.
5. The manufacturer must notify the Certification Department in writing to release test decks to their customers.

Remote Video Encoding/Local Video Encoding Manufacturer Certification

If an MLOCR is used to capture mailpiece images or to apply DPBCs, the MLOCR must be MASS certified before RVE/LVE system certification can be attempted.

RVE System Certification With MLOCR

Deck 1 MLOCR should be tested and certified before attempting the RVE test.

Deck 2 RVE test deck is processed entirely to remote coding via Remote Character Recognition (RCR) or RVE/LVE. MLOCR coding must be deactivated during this part.

The RVE/LVE Order Form has been combined with the MASS Order Form in the Remote/Local Video encoding Site information and Equipment Information section. Complete only those sections that apply to your certification.

FASTforward®/ LPE and NCOA^{Link}® MPE Audit

The *FASTforward*/LPE and NCOA^{Link} MPE annual audit has been combined with MASS Certification. For additional information, contact the *FASTforward* Department at 800-589-5766.

POSTNET™ Barcode

Until further notice, POSTNET testing is available since the USPS delayed implementation of the Intelligent Mail® Barcode (IMb™) for automation discounts. Upgrades to IMb will require testing before the IMb can be sprayed on production mail.

Intelligent Mail® Barcode

The Intelligent Mail Barcode is the new generation of USPS barcode technology. The barcode is used to sort and track letters and flats. It combines the capabilities of the POSTNET barcode and the PLANET Code® barcode into one unique barcode. The Intelligent Mail Barcode is a height-modulated barcode using four different vertical bar types.

MASS testing for machines that currently have the capability to spray an IMb should be tested using the Intelligent Mail Barcode. If a machine has been POSTNET certified, IMb testing is required before the IMb can be sprayed on production mail. The fee for each IMb only test is $300 per test deck.

Visit the RIBBS website at http://ribbs.usps.gov/onecodesolution for additional information on the Intelligent Mail Barcode.

IMb Testing Requirements

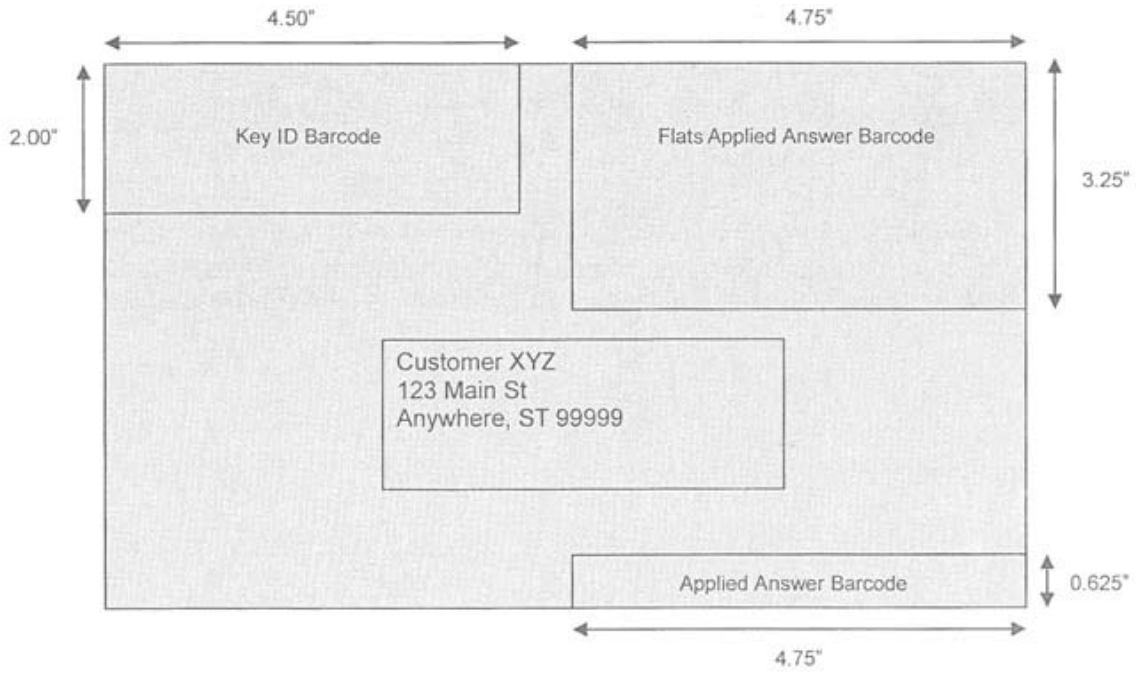
- Set Barcode ID to “00”
- Set Service Type to any valid 3-digit Service Type identifier
- Mailer ID can be 6 or 9 digits, but cannot be all zeroes. The same Mailer ID must be sprayed on all mailpieces

- Serial number can be 6 or 9 digits, but cannot be all zeroes. A unique serial number "must" be strayed on each mailpiece.

Note: Failure to adhere to these requirements will result in failure of the MASS test.

For MASS testing, the Certification Department will follow the "Top Choice Barcode Priority." The top choice barcode is defined by the current USPS guidelines for DPBC as the physically lowest and longest decodable barcode in a particular type (PLANET, Intelligent Mail Barcode). For example, if an Intelligent Mail Barcode exists in the address block and a second Intelligent Mail Barcode exists in the barcode clear zone, the Intelligent Mail Barcode in the clear zone will be read as the barcode answer because it is physically lower on the mailpiece.

For Flats testing, the barcode answer can be returned above the address block, within an area 4.75 inches from the right edge and 3.25 inches from the top of the mailpiece, or in the barcode clear zone.



- The **USPS *Key ID Barcode*** read zone is referenced from the top left corner of the mailpiece.
- The ***Applied Answer Barcode*** read zone is referenced from the lower right corner of the mailpiece.
- The ***Flats Applied Answer Barcode*** read zone is referenced from the top right corner of the malpiece (activated by the "Flats" option on Transport Control). This will be an additional read zone to the current Applied Answer Barcode.

User Certification

Customers ***must*** provide correct machine models, serial numbers and configurations on the MASS Order Form and PS Form 3553. If no changes have been made, the information should be the same as the last MASS certification, with the exception of the software and version number which may be different. If the customer is unsure about the correct information, contact the machine provider.

The user must order a separate test deck for each machine via the MASS Order Form. Existing networked machines can be tested in groups of four. Any new encoders must be tested as a standalone system for the first year.

A Terms and Conditions document is required for the first required certification test for the current cycle. Only one signed terms document is needed per location.

The user will not receive test decks until the machine manufacturer has completed certification and authorizes the USPS to release test decks for their machine types.

It is the end user's responsibility to ensure the correct software is installed before testing. **All tests must be processed with static data to avoid failure of the MASS test.** The CASS Summary Report (PS Form 3553) must reflect the new version number.

When a machine identifier is sprayed on a MASS test, an "X" must be printed on the mailpiece for the product month indicator. This indicates that static data was used for testing.

Postal representatives are not required to witness a MASS test. A checklist of items pertaining to the test and an inventory sheet for the machine being tested will be included in the test deck. The person performing the test should complete the check list. This information will be used in the event there are questions about the test.

1. Process the test deck and return it to the NCSC for evaluation.
2. Test decks returned by other commercial carriers will be rejected.
3. The USPS will make every attempt to return test results within ten business days. All tests are processed in the order in which they are received.
4. If a test fails, a new test deck will be shipped.
5. When certification is achieved, the Certification Department issues a MASS certificate.

UNITED STATES POSTAL SERVICE®

MASS™ Order Form

Customer Information *(Please print)*

Company Official Contact Name	Email Address
Company Name	
Street Address, P.O. Box, Rural/Hwy Contract, or Route Number ❑ New Facility	Apt/Suite
City	State / ZIP + 4® Code
Telephone Number *(Include area code)*	Fax Number *(Include area code)*
Company Salesperson / Telephone Number *(Include area code)*	Salesperson Email Address

Billing Address *(If different from Customer Information)*

Street Address, P.O. Box, Rural/Hwy Contract, or Route Number ❑ Moved ❑ New Facility	Apt/Suite
City	State / ZIP + 4

Equipment Information

I request that my certification be maintained in U.S. Postal Service® documents and records as:

❑ Service Bureau ❑ Mailer ❑ Manufacturer

❑ I do not wish to be listed in U.S. Postal Service pubs.

All MLOCR machines connected to a *FASTforward*® black box or MPE box MUST process the MASS test deck with *FASTforward* or MPE mode turned on. Check here if a *FASTforward* black box or MPE box is installed and this machine is operating with *FASTforward or MPE* turned on. ❑ *FASTforward* ❑ *MPE*

Is this machine capable of printing a LACS$^{Link®}$ converted address and Suite$^{Link®}$ appended address? ❑ yes ❑ no

You **MUST** return a hardcopy of PS Form 3553, *CASS™ Summary Report*, with the MASS test deck.

User Acknowledgement Statement

I hereby certify that all information on this application is accurate and correct. I also certify that the responses provided on the MASS certification test deck will be obtained using the same configuration as used in the processing of customer/client address files and that any modification to the products used to process this test will require retesting and recertification prior to use or release. The MASS test deck will be processed in-house with company-owned or leased software/hardware. I further certify that this address-matching product contains technology that disables access to outdated U.S. Postal Service data as stated in the *DMM*® 708.3.

CASS/MASS certification scores are confidential information and the applicant agrees not to disclose scores achieved on their passing test for the purpose of marketing their software or hardware product.

Company Official Contact Signature	Date

Return Order Form To	NCSC Use Only
MASS DEPARTMENT NATIONAL CUSTOMER SUPPORT CENTER UNITED STATES POSTAL SERVICE 6060 PRIMACY PKWY STE 101 MEMPHIS TN 38188-0001 Fax: 901-681-4440	Customer Number Date PRDT Code

Note: This page may be copied for multiple MLOCR systems. A completed form must be submitted for each MLOCR system.

Type of Certification

Indicate the type of certification requested.

☐ Renewal Certification ☐ New Certification ☐ Moved/Relocated ☐ Upgraded
☐ Reassembled ☐ Demonstration ☐ Hybrid/Conversion

Installation date *(Not required for annual certification.)*

Type of MASS™ Test

Indicate the type of MASS test requested.

☐ MLOCR ☐ MLOCR with RVE ☐ Encoder ☐ RVE ☐ LVE ☐ Flats ☐ Intelligent Mail® Barcode

MLOCR

Software Product	Version Number	Configuration	MASS ID

Equipment Manufacturer	Model Number	Serial Number

Encoding Stations

Software Product	Version Number	Configuration	MASS ID

Equipment Manufacturer	Model Number	Serial Number*

** List all serial numbers for networked systems and indicate which one is the server (4 stations for test deck).*

Remote/Local Video encoding Site Information

Company Official Name

Street Address, P.O. Box, Rural/Hwy Contract, or Route Number	Apt/Suite

City	State	ZIP + 4® Code

Telephone Number *(Include area code)*	Fax Number *(Include area code)*

Software	Version	Configuration

Equipment Information

Image Capturing Equipment Manufacturer	Model Number	Serial Number	MASS ID

Barcoding Equipment Manufacturer	Model Number	Serial Number	MASS ID

MASS Certification Date *(If applicable)*

Hybrid Equipment Information Before Conversion

Equipment Manufacturer	Model Number	Serial Number

Change of Ownership

Equipment Model Number	Serial Number	MASS ID

Previous Owner's Name

Previous Owner's Address

If the machine is not physically relocated, a new MASS certificate may be issued. If the machine is physically relocated, the customer must follow the machine relocation guidelines.

Test Deck Specifications

MASS™ test decks are designed to exercise MLOCR/RVE/LVE and encoding station address-matching software look-up capabilities emulating the CASS™ Stage files. The input addresses represent the same type and approximate mix of questions in the CASS Stage files.

All MLOCR test decks will contain 2,000 test mailpieces, while all encoding station tests contain 350.

The test deck used to complete RVE system certification are printed in two fonts; half of the deck is printed in a Gothic text and half in a cursive script font designed to be rejected from MLOCR processing.

Each test mailpiece consists of one piece of 8 1/2 x 11 inch white, 20 pound paper folded and inserted into a 24-pound, white-wove, 5 3/4 x 9 inches window envelope. The envelope has two windows – one upper and one lower. The upper window measures 1 1/4 x 4 inches and is located 3/8 inch from the left edge and 3 11/16 inches from the bottom edge. The bottom window measures 1 3/8 x 4 1/2 inches and is located 2 1/16 inches from the left edge and 11/16 inch from the bottom edge.

Data elements internal to the Postal Service are printed on the insert and appear in the upper window. These elements identify the specific deck to which any test mailpiece belongs, the customer tracking number, and the exact question key number appearing on that mailpiece. The test address appears in the lower window.

RVE test decks are designed to exercise all portions of the RVE systems address-matching software look-up capabilities by emulating the CASS Stage II files. The addresses printed on the test mailpieces represent the same types of addressing anomalies found in the CASS Stage II test. Although the actual address represented on the test mailpiece may differ from one test deck to another, the type and number of anomalies are similar.

Test Deck Processing Procedures

MASS™ test decks must be processed with static data. When a machine identifier is sprayed on a MASS test, an "X" must be printed on the mailpiece for the product month. This indicates that static data was used for testing.

Note: Failure to use static data will result in test failure.

All MASS™ certification tests must be conducted in a "normal operations" state, meaning that the system must be configured as it would be when it is used to produce mail for automation discounts.

Mailpieces with forwardable addresses will be included in the MASS test for all certified *FASTforward*®/LPE and MPE systems. The interface must be active when taking a MASS test. This test will be used as an annual audit for the Licensing and Certification Department. If the appropriate mailpieces are not forwarded, the grader will assume the interface was not operational and the test will be invalid. Mailpieces with forwardable mailpieces that are not assigned a new address will be graded as incorrect.

Flat mailpieces are handled differently than letter-sized mail. There are limitations on the placement and number of barcodes that can be used on a flat mailpiece, and a clear zone is required for placement of forwardable, coverted and appended addresses. As a result, the methods allowed for handling flat mailpieces processed using these methods are not the same as methods for letter-size mail.

For MASS testing, two options are applicalbe for processing flat-seize mailpieces that are *FASTforward*/LPE or MPE certified. These methods are also used for converted addresses for LACS^{Link} and appended addresses from Suite^{Link}.

Option 1: If a machine cannot spray a change of address, the mailpiece should be culled out of the test deck. These mailpieces should be banded together with a rubberband and labeled with a piece of paper to show the type of mailpieces included in the bundle. Return the cull bundle with the processed test deck.

Option 2: Obliterate the old address and affix the new address label over the address block. The barcode is sprayed along with the machine identifier in the clear zone.

For more information, contact the Licensing Department at 800-589-5766 or via email at ncoalink@usps.gov.

There is a 1% tolerance on the 3553 counts where total ZIP+4/DPV confirmed records must not exceed total records coded in the customer's test. All rejected mailpieces may be reprocessed in the reject mode. An exception will be made if the machine does not have reject mode capability.

MLOCR Setup

A checklist that contains general guidelines for processing a MASS test deck is included with every test deck. Because each manufacturer's machines vary, the actual processing of a MASS test deck may differ from one machine to another. To achieve optimum results from a MASS certification attempt, consult the equipment manufacturer regarding all processing-related issues.

Clean the equipment according to the manufacturer's instructions. Pay particular attention to the optics, and run the manufacturer's diagnostic routine to optimize the character-recognition software. Run several pieces with the barcode turned off to verify the setup and ensure that the address block is reading properly.

Because the NCSC processes each test deck on a barcode reader, the quality of the barcode returned on the test mailpieces is important. If more than 2.5 percent of the mailpieces generated contain unreadable barcodes, these mailpieces will be rejected, which will decrease the chance of certification.

Ensure the MLOCR has been prepared according to the manufacturer's instructions regarding sort schemes, pick-off settings, vacuum system and belt speed adjustments.

It is the End-user's responsibility to ensure the CASS Summary Report (PS Form 3553) reflects the revised version number for the current cycle. Any other version number on the PS Form 3553 will render the test invalid.

Note: ***MLOCR/RVE/LVE certifications must be attempted by the end user. No one besides the end users or his/her employee(s) may complete an MLOCR/RVE/LVE system test. If it is determined that unauthorzed***

individuals completed the MLOCR/RVE/LVE test, the test deck will be disqualified.

MLOCR Test Deck Processing

Verify that the test deck corresponds to the machine manufacturer's model and serial number. This information is listed in the computer-generated documents provided with the test deck.

Process each test deck in a manner that ensures every test mailpiece that should receive a DPBC is coded. By design, not all test mailpieces are expected to be coded. After processing the entire test deck, all rejects may be reprocessed in the reject mode. MLOCRs can relabel up to 100 mailpieces.

After the test deck is completely processed, a computer-generated facsimile of the PS Form 3553, CASS Summary Report should be printed and returned to the NCSC for evaluation.

Note: All dates must be in the following format: MM/DD/YYYY.

The date of the database product used for B2a is 99/99/2013 (static data).

The MASS Department will compare and analyze the hardcopy PS Form 3553 against the answer field information returned in the test deck. Computation of PS Form 3553 values must be based on the answers returned during the matching process—never from input fields. In normal operations, if a user chooses to overwrite input fields with output information, production of the PS Form 3553 must be able to discern between processed and unprocessed records. If any errors are identified in the comparison, the grading process will continue; however, certification cannot be issued until a valid PS Form 3553 is submitted to the MASS Department.

Note: ***The customer must sign and date the PS Form 3553 and attach one of the rejected test mailpieces to the form. PS Form 3553 must comply with the requirements outlined in the most current DMM and must represent the test deck processed.***

The entire test deck must be returned, including all rejected, damaged, and non-coded mailpieces.

Encoding Station Setup

The processing of mail on a MASS™ test deck varies between manufacturers of encoding station equipment and model types. To achieve optimum results, consult the equipment manufacturer regarding all processing-related issues.

Verify the encoding station is in proper operating order before processing a MASS test. If more than 2.5 percent of the mailpieces generated contain unreadable barcodes, these mailpieces will be rejected, which will decrease the chance of certification.

Encoding Station Test Deck Processing

Mailpieces for networked systems should be equally separated and processed on each machine during the test. One PS Form 3553 should be created for each group of networked machines. Existing networked machines may be tested in groups of four.

Process each test deck in a manner that ensures every test mailpiece that should receive a DPBC is coded. By design, not all test mailpieces are expected to be

coded. After processing the entire test deck, all rejects may be reprocessed in the reject mode. Encoders can relabel to 50 mailpieces.

After the test deck is completely processed, a computer-generated facsimile of the PS Form 3553, CASS Summary Report should be printed and returned to the NCSC for evaluation.

Note: ***The customer must sign and date the PS Form 3553 and attach one of the rejected test mailpieces to the form. PS Form 3553 must comply with the requirements outlined in the most current DMM and must represent the test deck processed.***

The entire test deck must be returned, including all rejected, damaged, and non-coded mailpieces.

Shipping Instructions

The National Customer Support Center (NCSC) in Memphis, Tennessee, sends all test decks to customer sites. Return shipment of a completed test deck is the customer's responsibility.

Please return completed test decks to the following address:

MASS CERTIFICATION
NATIONAL CUSTOMER SUPPORT CENTER
UNITED STATES POSTAL SERVICE
6060 PRIMACY PKWY STE 101
MEMPHIS TN 38188-0001

Note: Test decks returned by other commercial carriers will be rejected.

MASS Grading

A passing score of 98.5% must be achieved and the following requirements must be met on all test decks to attain MASS certification.

1. Can not exceed the maximum allowed for incorrectly coded Perfect Address
2. Can not code to a Fatal Addon (not allowed)
3. Can not exceed the maximum allowed for incorrectly coded DPBC
4. Can not exceed the 1% tolernace on the 3553 counts
5. CASS Summary Report (PS Form 3553) must be complete and accurate
6. DPV False Positives seed records must be reported to DSF2STOP@USPS.GOV.
7. If a test fails, a new test deck will be shipped.

When certification is achieved, the Certification Department issues a MASS certificate.

FASTforward®/ LPE and NCOA^{Link}® MPE Grading

A passing score of 95% must be achieved to pass the FF/LPE or NCOA^{Link} audit portion of the test. If the FF/LPE or NCOA^{Link} audit fails, the MASS Department will inform the Licensing and Certification Department to put the MLOCR in a recertification mode.

See the chart below for grading results:

MASS	F/F or NCOA^{Link}	Result
Pass	Pass	MASS Certified
Pass	Fail	MASS Certified New FF/LPE or NCOA^{Link} test sent from Licensing (Customer in Re-Cert Mode)
Fail	Fail	Customer must retest for MASS, test will include forwardable pieces. New FF/LPE or NCOA^{Link} test sent from Licensing (Customer in Re-Cert Mode)
Fail	Pass	Customer must retest for MASS, test will include forwardable pieces.

Grading for Standardization

The CASS test for hardware manufacturers will continue to grade for address standardization to verify that software does not lose or modify critical address elements. This issue is especially critical in *FASTforward*/LPE and NCOA^{Link} MPE equipped MLOCRs.

Grading for Customer 3553 Information

When applicable, end-users must verify that rejected mailpieces are run in the reject mode. There is a one-percent (1%) tolerance on the 3553 counts where the total ZIP+ 4/DPV confirmed records must not exceed the total records coded in the customer's test. If the tolerance exceeds this percentage, the test will fail.

It is the End-user's responsibility to ensure the CASS Summary Report (PS Form 3553) reflects the revised version number. Any other version number on the PS Form 3553 will render the test invalid.

MASS certification must be attempted by the end user. No one besides the end users or their employee(s) may complete the MASS test. If it is determined that unauthorzed individuals completed the test, the test deck will be disqualified.

Penalty for Misread/ Miscodes

In an attempt to reduce the number of miscodes caused by variances in optical character recognition systems, the penalty for misreads/miscodes is 1.5 percent, and the allowance for rejects is 7.5 percent. A misread/miscode is defined as an inaccurate barcode applied to the test piece caused by an erroneous interpretation of the primary address number (i.e. 100 Main St is incorrectly read as 10 Main St). Accurate character recognition is a critical factor in successfully obtaining MASS certification.

Character recognition systems are challenged to improve their capabilities to accurately discern characters, and to not spray barcodes when clearly ambiguous conditions are present. MASS is relaxing the number of pieces required to be coded to facilitate this approach.

Penalty for Default Matches in Keying Environments

MASS™ will assess penalties for default matches in keying environments only. Depth of code is an issue when an operator fails to key the entire address, particularly when the secondary address information is excluded. The penalty will be doubled for each depth of code error.

MERLIN®

The MERLIN system is used to grade MASS™ test decks that exceed the 2.5 percent unreadable barcode allowance. When more than 2.5 percent of the returned test deck's mailpieces contain an unreadable barcode, all mailpieces with an unreadable barcode will be checked on the MERLIN system. If the system reports that a barcode is unreadable, the mailpiece will be graded as an automatic failure. If the system reports that the barcode is readable, the mailpiece will be manually graded and scored.

To assist MASS users in evaluating MERLIN performance, the Certification Department offers a free, 100 piece test deck for system evaluation. The test deck can be graded on a MERLIN system by the Certification Department. The free MERLIN evaluation will not affect existing MASS certification status.

Delivery Point Error Allowance

A delivery point error is assessed only if the ZIP Code and add-on are correct but the delivery point values are incorrect. The delivery point error allowance is 0.5 percent of the total number of mailpieces available for grading.

Perfect Address Error Allowance

Perfect Addresses are defined as having 100 percent accurate content and format, fully spelled-out or abbreviated. Only valid perfect addresses are included in the testing, and a score of 100 percent correct coding is required. Perfect addresses are pure and may not contain aliases, alternates, or highrise default alternate addresses. In addition, MASS will only include perfect addresses in which no other address record on the database affects or influences the outcome of the match.

Fatal Add-On Error

The return of '0000' in the ZIP + 4 add-on, or the return of an **invalid** '9999' in the ZIP + 4 add-on, will continue to be a fatal add-on error for CASS/MASS certification and will require retesting.

Evaluation

Tests are graded and evaluated in the order they are received. Each test deck received at the NCSC is scanned by a barcode reader. A customer grading file is created and uploaded to the mainframe where it is processed against the current MASS grading scheme. The graded test generates a grading report that is evaluated by the Certification Department. We will attempt to provide test results within ten business days.

When a test achieves certification, a certificate is mailed to the customer. See Appendix 4 for a sample of the MASS certificate.

If a test fails, a copy of the grading report is mailed to the customer and a new test deck is processed and mailed. See examples of thse reports in Appendices 5 and 6. The customer is notified with the reason for test failure.

Grading is based on the barcode sprayed by the MLOCR onto the test mailpiece and is deemed either correct or incorrect. If no answer is the correct answer, then the correct answer is blank (or spaces). In situations where the input causes a multiple-response condition and all candidate records share the same 5-digit ZIP Code, the vendor may elect to apply a 5-digit barcode or leave spaces on the test piece.

There are several types of records to consider when grading:

1. Must answer (i.e., special flag A5). These records must be barcoded correctly. If the record is barcoded incorrectly or left blank, it is added to the total number of incorrectly barcoded records.
2. Optional answer (i.e., special flag A9, where no answer is bypassed). It is not mandatory to code these records. If the records are barcoded correctly, they are added to the total number of correctly barcoded records. If they are not barcoded correctly (left blank), they are not added to the total number of correctly or incorrectly barcoded records. Optional answer categories are identified by the single asterisk on the "Customer No Match Translation of Error Codes $ Special Flags" in Appendix 3.
3. Must not answer (i.e., special flag KO, where no answer is the only correct answer unless using DPV as tiebreaker). If these records are barcoded (not left blank), they are added to the number of incorrectly barcoded records. Must Return input records are identified by the double asterisk on the "Customer No Match Translation of Error Codes & Special Flags" (Appendix 3). DPV enabled software may elect to code where input address ambiguities (i.e., missing suffixes, misspelled street name, etc.) and data anomalies exist wthin the ZIP + 4 file.
4. Grading for mail standardization records may or may not contain an input ZIP Code, may have a misspelled city name, and may contain a nonmailing name. The address also may contain a numeric street name, misspelled street name, or street names that could possibly contain a pre- or post-directional. Address-matching software must be able to correctly match the input address with the appropriate carrier rout, 5-digit or ZIP + 4 record and return a properly standardized answer along with the ZIP Code, +4 add-on code, delivery point code, and the check digit if it DPV confirms. CASS accepts and grades the answer as correct in the standard abbreviated format, completely spelled out, exactly as presented in the USPS AIS product or the input record for non-matched records. These categories are identified by the three asterisks on the "Customer No Match Translation of Error Codes & Special Flags" in Appendix 3.
5. Normalization is required for subcategory MA. Some PO Box, Rural Route and Highway Contract input addresses often appear on a mailing list with the following words and must be converted as shown: This category is identified

by the four asterisks on the "Customer No Match Translation of Error Codes & Special Flags" in Appendix 3.

INPUT	OUTPUT
Drawer 10	PO Box 10
Drawer A	PO Box A
Caller 10	PO Box 10
Lockbox 10	PO Box 10
Firm Caller A	PO Box A
Bin A	PO Box A
Rural Route 1	RR 1
FDR Route 1	RR 1
Star Route 1	HC 1
Highway Contract 1	HC 1

	Answer = NCSC Answer	Answer = Other Answer
Must Answer	Add 1 to correct count	Add 1 to incorrect count
Optional Answer	Add 1 to correct count	Add 1 to incorrect count
Must Not Answer	Add 1 to correct count	Add 1 to incorrect count

$$\frac{\text{Correct}}{\text{Correct + Incorrect}} = \%$$

Note: **The score required to achieve MASS certification is 98.5% or higher.**

Appendix 1: PS Form 3553, *CASS™ Summary Report*

UNITED STATES POSTAL SERVICE

CASS™ Summary Report

This form may be generated as the output of address matching processing using CASS Certified™ software in conjunction with current USPS® address database files. Any facsimile must contain the same information in the same format as the printed form.

See DMM® Section 708 for more information.

A. Software

CASS A1	1. CASS Certified Company Name	2. CASS Certified Software Name & Version	3. Configuration
	4. Z4Change Certified Company Name	5. Z4Change Certified Software Name & Version	6. Configuration
	7. DirectDPV™ Certified Company Name	8. DirectDPV Certified Software Name & Version	9. Configuration
	10. eLOT® Certified Company Name	11. eLOT Certified Software Name & Version	12. Configuration
MASS A2	1. MASS™ Certified Company Name	2. MASS Certified Software Name, Version & Model No.	3. Configuration 4. MLOCR Serial No.

B. List

1. List Processor's Name	2. Date List Processed	3. Date of Database Product Used
	a. Master File	a. ZIP + 4® File
	b. Z4Change	b. Z4Change
	c. DirectDPV	c. DirectDPV
	d. eLOT	d. eLOT
	e. CRIS	e. CRIS
4. List Name or ID No. (*If using ID No., number must start with ID #*)	5. Number of Lists	6. Total Records Submitted for Processing

C. Output

Output Rating	1. Total Coded	2. Validation Period	Output Rating	1. Total Coded	2. Validation Period
a. ZIP + 4/DPV Confirmed ▶		From To	d. 5-Digit Coded ▶		From To
b. Z4Change Processed ▶			e. CRRT Coded ▶		From To
c. DirectDPV ▶		From To	f. eLOT Assigned ▶		From To

D. Mailer

I certify that the mailing submitted with this form has been coded *(as indicated above)* using CASS Certified software meeting all of the requirements listed in the *DMM* Section 708.

1. Mailer's Signature	2. Date Signed

3. Name and Address of Mailer

E. Qualitative Statistical Summary (QSS)

For informational Purposes Only: QSS is solely made available for the list processor's review and analysis. This information is not to be considered by the U.S. Postal Service® personnel in determining rate eligibility under any circumstances. See reverse for a detailed explanation.

High Rise Default	High Rise Exact	RR Default	RR Exact	LACS[Link®]	EWS	Suite[Link®]

Privacy Notice: For information regarding our Privacy Policy, visit USPS.COM®.

Instructions

A. Software

A1.1, 1.4, 1.7, & A2.1 – Company Name: Enter the name for *each kind of software* as it appears on the CASS™/MASS™ certificate.

A1.2, 1.5, 1.8, & A2.2 – Software Name and Version: Enter name and version for *each kind of software* as it appears on the CASS/MASS certificate.

A1.3, 1.6, 1.9, & A2.3 – Configuration: Enter the specific software configuration parameter settings as it appears on the CASS/MASS certificate.

A2.4 – MLOCR: Enter the MLOCR Serial Number as it appears on the MASS Certificate.

NOTE: If information entered in this section represents the list processing of more than one certified company, attach a list of company names, software names and versions, as well as the configuration to code the address information used in the mailing.

B. List

1. List Processor's Name: Enter the company name that coded the address list(s) and/or performed ZIP + 4®/DPV® confirmation using CASS Certified™software. Attach a list if additional space is required.

2. Date List Processed: Enter the processing date for each list. If multiple lists, enter the oldest date from the list.

3. Date of Database Product Used: Enter the version date of each database package used for processing. If multiple lists, enter the oldest version date from the lists.

4. List Name or ID No.: Print the name or identification number of the address list. If more than one list is used, leave blank. If the identification number is used, the number MUST be preceded by "ID#".

5. Number of Lists: Enter the number of lists used to produce the mailing.

6. Total Records Submitted for Processing: Enter the total number of address records *(from all lists in item B5)* submitted at the time the list(s) was coded.

C. Output

1. Total Coded: Enter the total number coded.

2. Validation Period: Enter the effective dates as shown below:

Product Name	From Date	To Date
ZIP + 4/DPV Confirmed	30 days before *(the 15th of each month or bi- monthly)* or no later than 105 days after the file date.	180 days after the ZIP + 4 valid "From" date.
DirectDPV™	30 days before *(the 15th of each month or bimonthly)* or no later than 105 days after the ZIP + 4 product file date.	180 days after the DirectDPV/ZIP + 4 valid "From" date.
Five-Digit Coded	30 days before *(the 15th of each month or bimonthly)* or no later than 105 days after the ZIP + 4, Five-digit ZIP, or the Carrier Route product date.	365 days after the Five-Digit Valid "From" date.
Total Carrier Route Coded	30 days before or up to 105 days after the ZIP + 4, Five-Digit ZIP™, or the Carrier Route product date *(the 15th of each month or bimonthly)* or up to 105 days after the file date.	90 days after the Carrier Route Valid "From" date.
eLOT® Sequence No. Assigned	30 days before or up to 105 days after the eLOT file product date *(the 15th of each month or bimonthly)*.	90 days after the eLOT valid "From" date.

D. Mailer

1. Signature: Signature of individual who processed the list, or the mailer's representative.

2. Date Signed: Enter the date this form is signed.

3. Name & Address of Mailer: Enter the name and address of the individual whose signature appears in item D1.

E. Qualitative Statistical Summary (QSS)

This information allows mailers and list processors to evaluate the quality of their address list processed through CASS software before its contents enter the mailstream. A significant number of Highrise default/rural route default matches, although these addresses remain eligible for postal automation rate discounts at this time, increase the costs and reduce the efficient delivery of this mail. Mailer's should research to obtain secondary unit designator address information or highrise addresses and specific box number information for rural route addresses which are coded to default records on the National ZIP + 4 File.

Highrise Default/RR Default

Entries in this box show the number of addresses that were default matched. Defaults are matches made to addresses that contain invalid/missing secondary address or box information. A highrise default contains the building street address in the primary range field and spaces in the secondary range field. A rural route default contains the route number in the primary name but also has spaces in the primary address range.

LACS$^{Link®}$ System

Entries in this box show the number of addresses which have been converted through the LACS^{Link} process. LACS^{Link} is a data product provided by the Postal Service to allow addresses that have been converted due to USPS changes or for 911 emergency systems to be linked with their new address.

Early Warning System (EWS)

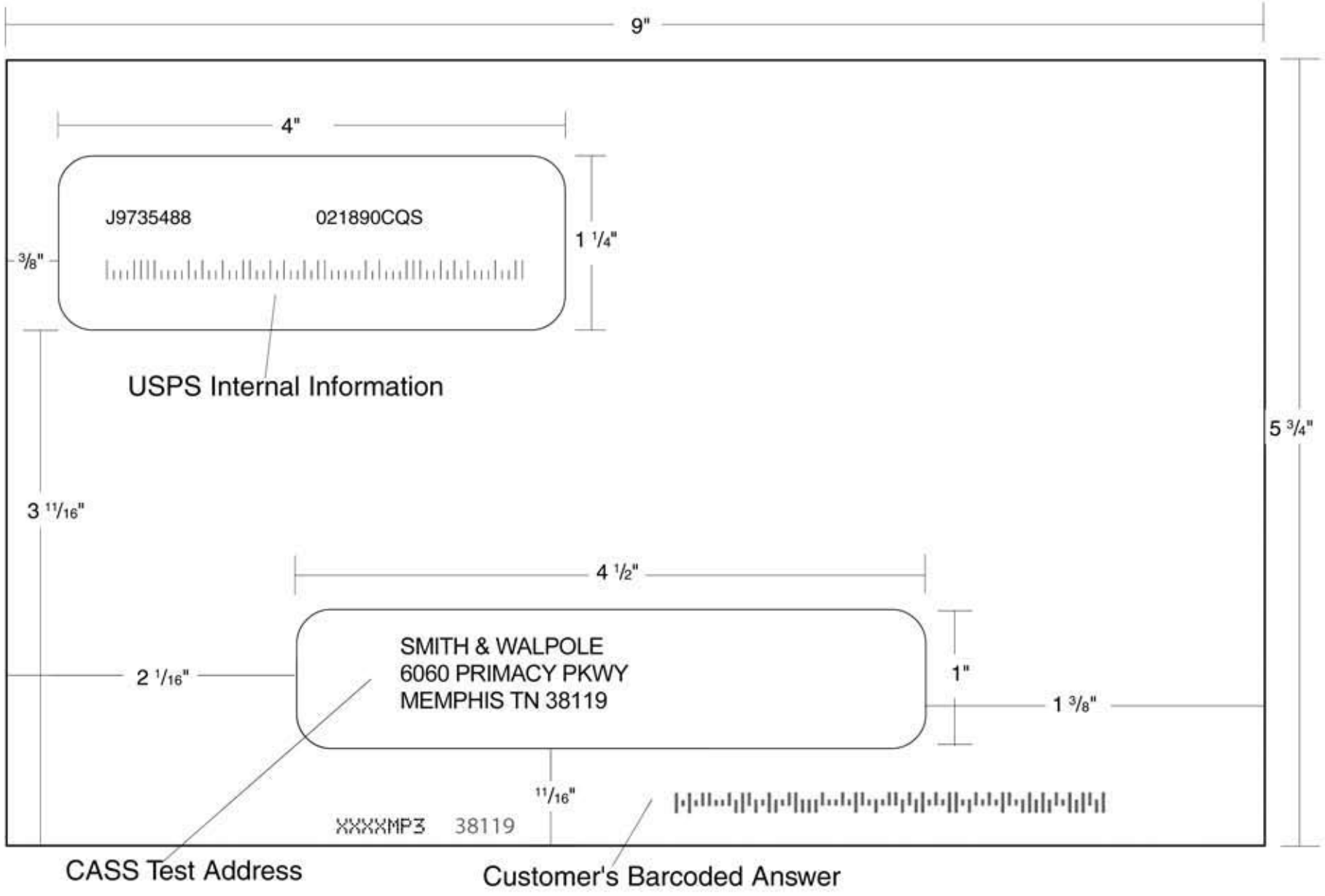
Entries in this box show the number of addresses on the processed address list that are new addresses not in the current U.S. Postal Service® ZIP + 4 File. These addresses are, however, valid addresses as formatted and should not be changed in any way since the U.S Postal Service will assign ZIP + 4's to these addresses on the next monthly ZIP + 4 File.

Suite$^{Link®}$ System

Entries in this box show the number of ZIP+4/DPV confirmed addresses that matched to a highrise default, and the Suite^{Link} process returned the appropriate suite number. Only Suite^{Link} enabled software will return a value in this box *(Check with your software vendor for obtaining this option)*. These address records are valid delivery points by the U.S. Postal Service. Addresses that are not confirmed by DPV are either new addresses not available on the current Delivery Sequence File, or are not valid and the list holder should further investigate to determine the accuracy of these addresses. Mailers should make every effort to ensure the quality of their address list(s).

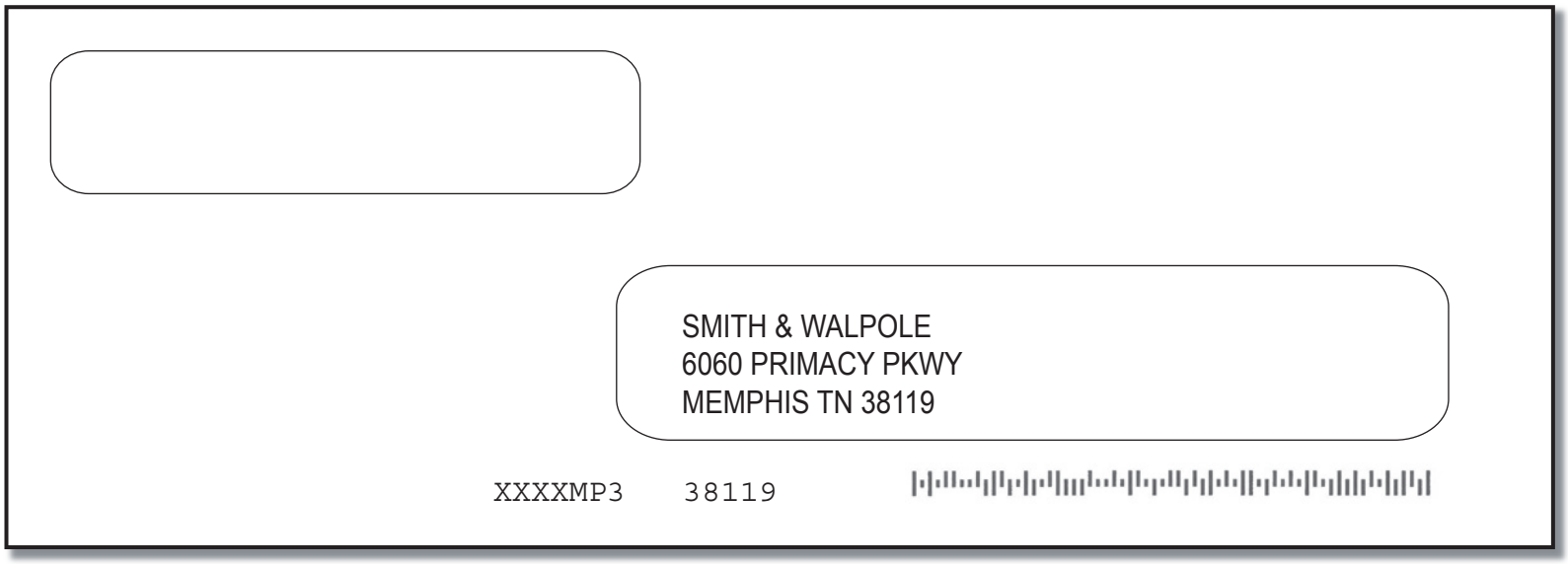
Appendix 2:
Test Mailpiece Examples

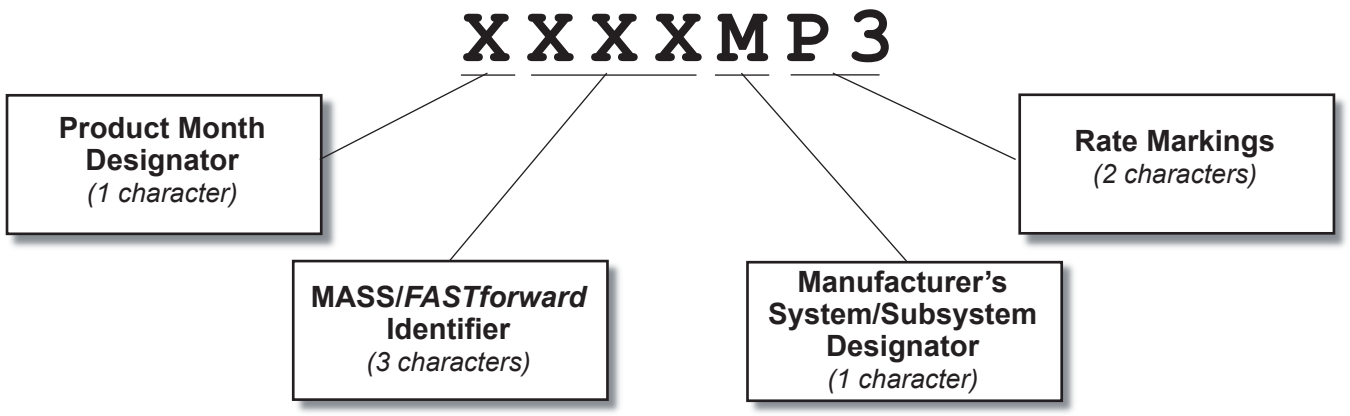
Test Mailpiece Example

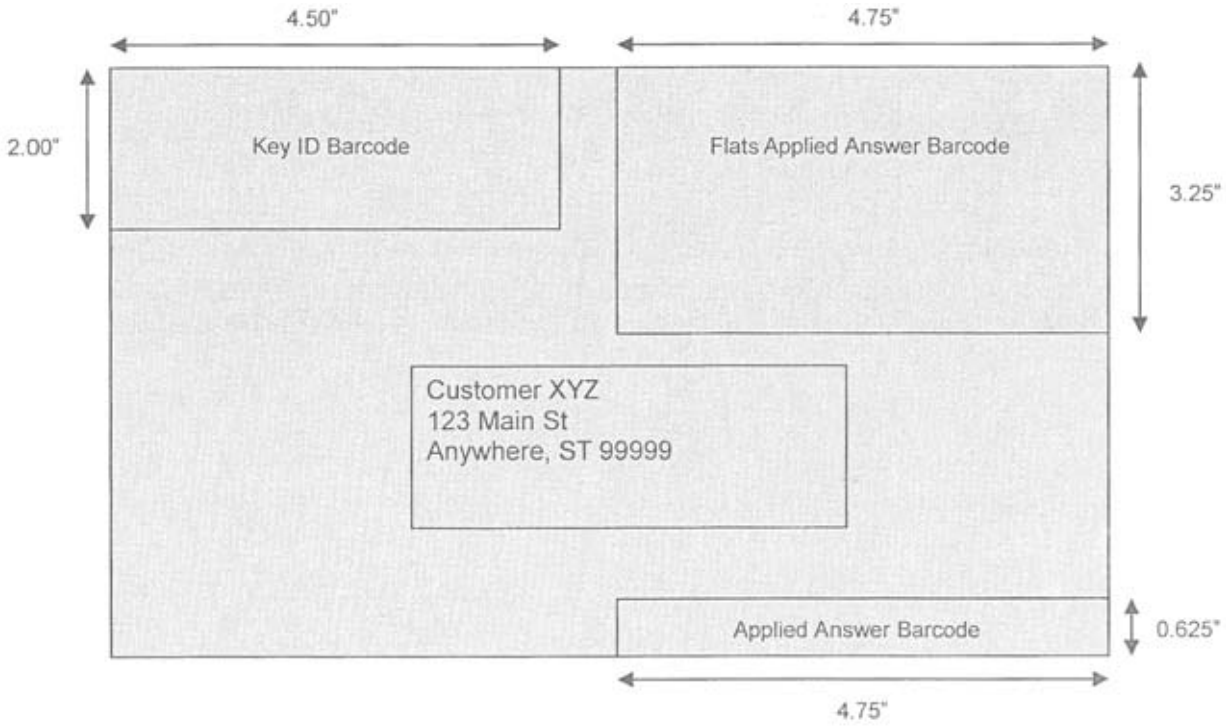


Identifier/Rate Code

The Identifier/Rate code consist of seven characters representing the product month, system identifier, manufacturer code and rate markings. All MASS™ certified equipment and systems must print the identifier together with the appropriate rate marking on each processed mailpiece bearing a ZIP + 4 Delivery Point Barcode. The *FASTforward*® platform Identifier is printed in place of the MASS Identifier for MASS certified systems *FASTforward* equipped and licensed. The MASS Identifier provides for an audit trail and combined with the *FASTforward* platform, the Identifier signifies whether the mailpiece has met Move Update requirements.







Read Zones

- The **USPS *Key ID Barcode*** read zone is referenced from the top left corner of the mailpiece.
- The ***Applied Answer Barcode*** read zone is referenced from the lower right corner of the mailpiece.
- The ***Flats Applied Answer Barcode*** read zone is referenced from the top right corner of the mailpiece.

Appendix 3:
Translation of Error Codes and Special Flags

Customer No Match Record Translation of Error Codes & Special Flags

All categories except L are required. Address-matching software must obtain a minimum accuracy rate of 98.5% in each required category to obtain CASS Certification.

Error Codes

01 5-digit ZIP not match
02 ZIP+4 not match
03 Carrier ID not match
04 City name not match
05 State abbreviation not match
06 Out of range
07 Address is non-deliverable
08 Unique ZIP Code not finest level of code
09 LACS indicator
10 Perfect address
11 General standardization error
12 eLOT sequence
13 eLOT A/D code
14 RDI
15 Fatal Error
16 LACSLink Indicator
17 LACSLink Return Code
18 SuiteLink Return Code
19 Incorrect delivery point barcode (Non-Fatal)
20 Incorrect delivery point barcode
21 PMB
22 Default flag error/Record type error
30 History
DO Confirmation
DC CMRA
DE Educational
DF False-positive
DT Delivery type
DN No stats
DB Business
DD Drop
DK Drop count
DW Throwback
DS Seasonal
DV Vacant
DL LACS
FT Footnote Code Error

Record Type

S Street
P PO Box
R Rural Route
H Highrise
F Firm
G General Delivery

Standard Address with Elements

(Spelled out or Abbreviated)

AA Firm Name - Abbreviation
AB Firm Name - Noise words
AC Firm Name - Address similar to firm name
AD Firm Name - Swap firm name and Address field
AE Normalized street name
AF Street Name - Spelling variation
AG Firm name not present - Valid Z4 on input match to firm
A0 5-digit
A1 Dropped 5-digit
A4 5-digit with non-mailing name
A5 Dropped 5-digit with non-mailing name
A8 5digit misspelled city
* A9 Dropped 5-digit with misspelled city

Standard Address

(Includes Reversed Alphanumeric Primary/Secondary Numbers, Reversed Pre/Post Directionals, and Secondary Number Combined with Primary Number)

B0 5-digit
B1 Dropped 5-digit
* B2 5-digit with misspelled street
* B3 Dropped 5-digit with misspelled street
B4 5-digit with non-mailing name
B5 Dropped 5-digit with non-mailing name
* B6 5-digit with misspelled street and non-mailing name
* B7 Dropped 5-digit with misspelled street and non-mailing name
B8 5-digit with misspelled city
* B9 Dropped 5-digit with misspelled city
BE Normalized street names

Standard Address with Post-Directional Dropped or Incorrect

CC Post-directional changed to a non-cardinal directional - no match
C0 5-digit
C1 Dropped 5-digit
* C2 5-digit with misspelled street
* C3 Dropped 5-digit with misspelled street
C4 5-digit with non-mailing name
C5 Dropped 5-digit with non-mailing name
* C6 5-digit with misspelled street and non-mailing name
* C7 Dropped 5-digit with misspelled street and non-mailing name
C8 5-digit with misspelled city
* C9 Dropped 5-digit with misspelled city

Standard Address with Pre-Directional Dropped or Incorrect

DC Pre-directional changed to a non-cardinal directional - no match
D0 5-digit
D1 Dropped 5-digit
* D2 5-digit with misspelled street
* D3 Dropped 5-digit with misspelled street
D4 5-digit with non-mailing name
D5 Dropped 5-digit with non-mailing name
* D6 5-digit with misspelled street and non-mailing name
* D7 Dropped 5-digit with misspelled street and non-mailing name
D8 5-digit with misspelled city
* D9 Dropped 5-digit with misspelled city

Standard Address with Suffix Dropped

E0 5-digit
E1 Dropped 5-digit
* E2 5-digit with misspelled street
* E3 Dropped 5-digit with misspelled street
E4 5-digit with non-mailing name
E5 Dropped 5-digit with non-mailing name
* E6 5-digit with misspelled street and non-mailing name
* E7 Dropped 5-digit w/misspelled street & non-mailing name
E8 5-digit with misspelled city
* E9 Dropped 5-digit with misspelled city

Dual Address

F0 Street address
F1 Box record
F2 Dual Address on separate line
F4 Street address with non-mailing name
F8 Street address with misspelled city
F9 Box record with misspelled city

Aliases

G0 5-digit - Base
G1 5-digit - Alias
G2 Dropped 5-digit - Base
G3 Dropped 5-digit - Alias
** G4 5-digit - Out of range
G5 30 char abbreviation alias

Alias/Mult Response

** H0 5-digit - Base
** H1 5-digit - Alias

Small Town Default

I0 Exist in ZIP+4
** I1 No match in ZIP+4 P&G records exist
** I2 General Delivery match in ZIP+4/ G rec only - no match
** I3 No match in ZIP+4/City State

Last Line

JA Input city/ZIP Code correspond; exact match in ZIP Code
JB Input city/ZIP Code correspond; Input City is non-mailing name, exact match in ZIP Code
JC Input city/ZIP Code don't correspond; inexact match in ZIP Code
JD Input city/ZIP Code don't correspond; inexact match in city
JE Input city equals 5-digit PLL, ZIP+4 PLL is different
JI Input city/ZIP Code don't correspond; best candidate is inexact match in finance number, but not in either City or ZIP Code. No Match.
J0 5-digit
J1 Dropped 5-digit
* J2 5-digit with misspelled street
* J3 Dropped 5-digit with misspelled street
J8 5-digit with misspelled city
* J9 Dropped 5-digit with misspelled city

Multiple Response+

** K0 5-digit
** K1 Dropped 5-digit
** K2 5-digit with misspelled street
** K3 Dropped 5-digit with misspelled street
** K4 5-digit with dropped or incorrect component
** K5 Dropped 5-digit and/or incorrect component
** K6 5-digit with dropped/incorrect component & misspelled street
** K7 Dropped 5-digit and/or incorrect component with misspelled street
** K8 5-digit with misspelled city
** K9 Dropped 5-digit with misspelled city

Inexact/Questionable Matching Logic

* L0 5-digit
* L1 Dropped 5-digit

Customer No Match Record Translation of Error Codes & Special Flags (cont.)

Key Elements Also Known As

**** MA Out of range - no match
M0 With 5-digit
M1 Dropped 5-digit
M8 5-digit with misspelled city
M9 Dropped 5-digit with misspelled city

*** NDF Position Error

N0 5-digit
N1 Dropped 5-digit

Extra Information

O0 5-digit
O1 Dropped 5-digit
O2 PMB on address line
O3 PMB on secondary address line
O4 Valid Secondary with '#' sign; exact match
O5 PMB number is a valid PO Box Number - no match
O6 Invalid secondary with '#' sign; default match
O7 Double '#' signs at the end of address line – invalid
O8 Double '#' signs at the end of address line, one valid value, one invalid value

Syndrome

P0 Seattle Syndrome wtih 5-digit on Input
P1 Seattle Syndrome with Dropped 5-digit on Input
*** P2 Salt Lake Syndrome with 5-digit on Input
*** P3 Salt Lake Syndrome with Dropped 5-digit on Input
P4 Flushing NY Syndrome with 5-digit on Input
P5 Flushing NY Syndrome dropped 5-digit on Input

ZIP Correction

R0 Incorrect 5-digit within finance no.
R1 Invalid 5-digit
R2 Incorrect 5-digit within finance no. and incorrect +4
R4 Incorrect 5-digit within finance no. and blank city/state
R5 Incorrect 5-digit not within finance no.

Highrise Default or Delivery Point Alternate

S0 With 5-digit
S4 With 5-digit highrise
S5 "Chase the Base" – Delivery point alternate on input, return highrise exact
** S6 With 5-digit highrise multiple

Hyphenated Ranges

T1 Numeric alpha no match to numeric/numeric alpha exists
T2 Alphanumeric/numeric alpha-transpose to make match
T3 Delete hyphen
T4 Add hyphen
T5 Secy alphanumeric insert hyphen and transpose – default
T6 Add alpha to match to numeric range only
** T7 Add double alphas and validate no match to numeric
** T8 Transpose alpha to beginning/no match to numeric range
TA Recombine hyphenated trailing primary alpha with secondary number
TB Recombine non-hyphenated trailing primary alpha with secondary number
TC Recombine hyphenated trailing primary numeric with secondary number
TD Recombine hyphenated trailing alphanumeric/numeric alpha with secondary number
TE Recombine secondary values into one; exact match only

APO / DPO / FPO

UA Bad org info in address line without ZIP Code
UB Out of range records for PSC box numbers
U0 Clean military addresses with 5-digit
U1 Reversed box/PSC number with ZIP Code
U2 Reversed box/PSC number without ZIP Code
U3 Good address/ZIP Code with invalid city name
*** U4 PSC box turned into PO Box with ZIP Code
** U5 Missing PSC, CMR, unit number with good box number
U6 Good military address with invalid ZIP Code
U7 Bad org info in Firm Name field with good ZIP Code
U8 Bad org info in Firm Name field without ZIP Code
U9 Bad org info in address line with ZIP Code

Delivery Address Line

** V0 Contains firm name
** V1 Contains highrise name

Multiple Finance Number Matching

** W0 Multiple response within finance no. - dropped 5-digit
W1 Single response within finance no.- dropped 5-digit
W2 Altered street name
W3 No correlation between city & ZIP-Match in ZIP
** W4 City and ZIP Code from different finance numbers
W5 City and State does not agree with ZIP Code
W6 City and ZIP Code agree, state from different finance

Highrise

X0 With a firm suite number
* X2 With misspelled street
X8 With a firm suite number and misspelled city

Split/Combined Elements

Y0 Combine pre-directional with street name
Y1 Split pre-directional words off street name
Y2 Split suffix words off street name
Y3 Drop suffix words off multi-word street names
Y4 Combine suffix with street name
Y5 Shift street name to pre-directional suffix to street name
** Y6 Invalid street name
* Y7 Street name spelling variations

ZIPMove

Z0 Valid match in new finance number/Match.
Z1 Invalid match in ZIPMove/No Match.
Z2 Valid ZIPMove match; invalid in new finance number/No Match.

Out of Range/Overlapping

** 10 Bad PO Box for finance no./ZIP
11 Overlapping PO Box ranges/return lowest ZIP+4
** 15 Bad rural route for finance no./ZIP
** 20 Invalid primary number
21 Invalid secondary number
22 "EWS" No match; Input is exact match to EWS record
23 LACS^{Link}
** 24 LACS^{Link} no match
25 SuiteLink (optional category)
26 SuiteLink no match (optional category)

Unique ZIP Codes

4A Valid city and ZIP Code
4B Valid city and ZIP Code with valid add-on (match)
4C Valid city and ZIP Code - default match
4D Input Unique ZIP – can make an exact match in non-unique if no match found in Unique (match)
4E No correlation between city and ZIP Code; match to city
** 4F No correlation between city and ZIP Code (no match; delete ZIP Code)
4G Input address line taken from unique ZIP+4 record, match into non-unique unless there is an exact match in a unique
4H No input ZIP - can make exact match to unique (firm name only)
4I Valid city and ZIP Code with invalid add-on (retain ZIP+4)
4J Input ZIP + 4 with add-on "0000" or invalid "9999" do not retain the input + 4. If no match is found, delete input + 4.

Puerto Rico

** 5A Missing noise URB - end address/multiple with valid or invalid URB
5B Drop or abbreviate leading suffix
5C Alpha or numeric - end address
5D Numeric house number - end address preceded by "#," "No.," or "Num"
5E Alphanumeric house number - end address preceded by "Blq"
5F Alphanumeric house number - begin/end address space alphanumeric
5G Alphanumeric house number - begin/end address hyphen alphanumeric
5H Hyphen house number/"Blq" and "Casa," "Blq" and "#"
** 5J Address contains standalone word "Buzon" (no normalization)
5K No URB input - Match to address with blank URB
51 No URB input - single response
** 52 No URB input - multiple response
53 Valid URB on input - single response with valid/invalid URB
** 54 Valid URB on input - multiple response with valid/invalid URB
55 Missing noise URB - single response with valid/invalid URB
** 56 Missing noise URB-multiple response with valid/ invalid URB
57 Valid URB end address-single response with valid or invalid URB
** 58 Valid URB end address - multiple response with valid or invalid URB
59 Missing URB noise end address - single valid/invalid URB

Magnet Streets With Multiple Parse Variations

** 6E Parsed street name or ZIP+4 street name contains directional or suffix
6F Variation in directional or suffix presentation
6G Suffix or directional dropped
6H Street name incorrectly split into multiple words
6K Trailing numeric/alpha value following a valid suffix

Multiple Address Lines and Perfect Addresses

7A Address line split between two lines
70 Perfect address
7B Multiple field addresses with split-indicia

* No answer will be bypassed
** Return input record (Unless using DPV to break the tie)
*** No grading for standardization
**** Normalization required

Appendix 4:
MASS Certificate

MASS™ Quality Certification

for

ZIP + 4® Delivery Point Code Matching Software System Certification

MLOCR MAILER/USER

TEST SAMPLE

COURTESY TEST

Serial Number(s):
123-123456
Configuration:
ABC

This certificate is valid from O2/2011 to 07/31/2013

UNITED STATES POSTAL SERVICE®

Kim Wilson

Manager, Address Management

Appendix 5:
Customer Statistics Report

This sample is for MASS only testing.

SPS 47-2467 U.S. POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM DATE: 11/05/2008
NATIONAL CUSTOMER SUPPORT CENTER TIME: 20:24:27
EPORT CII030P1 CUSTOMER STATISTICS PAGE: 1

CUSTOMER NAME: USPS
FASTFORW CUST:

CUSTOMER ID: 00421OMAY
SERIAL: 1234567
ID ASSIGNED: XXX
ID RETURNED: XXX
IM BARCODE: YES

GRADING STATISTICS		COUNT	
INITIAL TOTAL CASS RECORDS		2,000	
AVAILABLE FOR GRADING		1,992 (FF= 0)	
RECS BYPASSED		78 (FF= 0 / OLD= 0)	
Z4CHANGE/NON-DELIVERABLE	71		
MANUAL OVERRIDES	0		
REJECT < 7.5 %	6		
NO BARCODE SPRAYED	6		
ONLY CORRECT 5DIGIT SPRAYED	0		
BARCODE UNREADABLE (UNRD) < 2.5 %	1		
NO PLUS4 ON MAIL PIECE	0		
TOTAL RECORDS AVAILABLE FOR GRADING		1,914	100.00%
CORRECTLY CODED RECORDS		1,908 (FF= 0)	99.69%
PENALTY FOR MISREAD/MISCODE ERRORS	0 X .5	000000	
PENALTY DEFAULT (KEYING) DEPTH/CODE ERR	0	0	
CORRECTLY CODED ADJUSTED FOR PENALTIES		0000000000	000000%
BONUS POINTS AWARDED (NOT ENOUGH BONUS QUESTIONS CORRECT)			0.00%
TOTAL RECORDS COUNTED INCORRECT		6.00	0.31%
INCORRECTLY CODED RECORDS	6		
BARCODE UNREADABLE (UNRD) > 2.5 %	0		
REJECTS > 7.5% COUNTED INCORRECT	0		
PENALTY FOR MISREAD/MISCODE ERRORS	000000		
PENALTY DEFAULT (KEYING) DEPTH/CODE ERR	0		

****

INCORRECTLY CODED PERFECT ADDRESSES 0 (MAX= 3) - CAN NOT EXCEED MAX

INCORRECTLY CODED FATAL ADDON 0 - NO FATAL ADDON

INCORRECTLY CODED DPBC 0 (MAX= 9) - CAN NOT EXCEED MAX

****

FINAL SCORE (MINIMUM 98.5%): 99.69%

****

This sample includes *FASTforward* results.

SPS 47-2467 U.S. POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM DATE: 05/02/2010
NATIONAL CUSTOMER SUPPORT CENTER TIME: 20:11:02
EPORT CII030P1 CUSTOMER STATISTICS PAGE: 1

CUSTOMER NAME: USPS
FASTFORW CUST: F

CUSTOMER ID: 004210AAX
SERIAL: 123456789
ID ASSIGNED: -XX
ID RETURNED: -XX
IM BARCODE: YES
LACSLINK PRINT: YES
STELINK PRINT: YES

GRADING STATISTICS		COUNT	
INITIAL TOTAL CASS RECORDS		2,000	
AVAILABLE FOR GRADING		1,995 (FF= 100)	
RECS BYPASSED		19 (FF= 4 / OLD= 0)	
Z4CHANGE/NON-DELIVERABLE	1		
MANUAL OVERRIDES	0		
REJECT < 7.5 %	2		
NO BARCODE SPRAYED	2		
ONLY CORRECT 5DIGIT SPRAYED	0		
BARCODE UNREADABLE (UNRD) < 2.5 %	0000000		
NO PLUS4 ON MAIL PIECE	0		
TOTAL RECORDS AVAILABLE FOR GRADING		1,976	100.00%
CORRECTLY CODED RECORDS		1,955 (FF= 96)	98.94%
PENALTY FOR MISREAD/MISCODE ERRORS	2 X .5	1.00	
PENALTY DEFAULT (KEYING) DEPTH/CODE ERR	0	0	
CORRECTLY CODED ADJUSTED FOR PENALTIES		1,954.00	98.89%
BONUS POINTS AWARDED (NOT ENOUGH BONUS QUESTIONS CORRECT)			0.00%
TOTAL RECORDS COUNTED INCORRECT		22.00	1.11%
INCORRECTLY CODED RECORDS	21		
BARCODE UNREADABLE (UNRD) > 2.5 %	0		
REJECTS > 7.5% COUNTED INCORRECT	0		
PENALTY FOR MISREAD/MISCODE ERRORS	1.00		
PENALTY DEFAULT (KEYING) DEPTH/CODE ERR	0		
FASTFORWARD MOVE SCORING:			
PIECES AVAILABLE FOR GRADING	100		
TOTAL RECORDS COUNTED INCORRECT		04.00	04.00%
TOTAL RECORDS COUNTED CORRECT		96.00	96.00%

****

INCORRECTLY CODED PERFECT ADDRESSES	0	(MAX= 3)
INCORRECTLY CODED FATAL ADDON	0	
INCORRECTLY CODED DPBC	2	(MAX= 9)

****

FINAL SCORE MASS (MINIMUM 98.5%): 98.89% FFS SCORE (MINIMUM 95%): 96.00%

****

This sample is the Intelligent Mail® Barcode result.

USPS 47-2467 U.S. POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM DATE: 04/01/2008
NATIONAL CUSTOMER SUPPORT CENTER TIME: 20:40 14
REPORT CIT033P1 CUSTOMER STATISTICS PAGE: 1

CUSTOMER NAME USPS
FASTFORW CUST.

CUSTOMER ID: 004210MAY
SERIAL. 12345678
ID ASSIGNED. XXX
ID RETURNED: XXX
IM BARCODE: YES

STATISTICAL OVERVIEW	COUNT
INITIAL TOTAL CASS RECORDS	350
RECORDS AVAILABLE FOR GRADING	348
RECORDS CODED CORRECTLY	348
TOTAL RECORDS COUNTED INCORRECT	0

****

TRACKING BARCODE FINAL SCORE (MINIMUM 100%) 100%

****

** BARCODE ID MUST EQUAL 00
** SERVICE CODE MUST EQUAL 700
** MAILER ID/SERIAL NUMBER OPTIONS
OPTION 1: MAILER ID MUST BE 666666
SERIAL NUMBER MUST BE 9 DIGITS THAT ARE THE SAME OR UNIQUE, BUT NOT ALL ZEROS
OPTION 2 MAILER ID MUST BE 999999999
SERIAL NUMBER MUST BE 6 DIGITS THAT ARE THE SAME OR UNIQUE, BUT NOT ALL ZEROS
OPTION 3. USE ASSIGNED MAILER ID. IF MAILER ID IS 6 DIGITS, SERIAL NUMBER MUST BE 9 DIGITS AND VICE VERSA

Appendix 6:
No Match Report

Customer No Match Report Reference Numbers

The reference numbers below provides a brief description of fields on the CASS Customer No Match Report located on the next page.

1. **CASS Record Given** is the address as it appeared on the mailpiece.
2. **CASS Key** uniquely identifies each test record on the mailpiece.
3. Pre-**Barcode** indicates if address is prebarcoded in the address block of the mailpiece.
   Y = Yes,
   N = No,
   * = customer sprayed pre-barcoded as customer answer
4. **Z9** indicates the presence of an invalid ZIP + 4 Code on the mailpiece.
   Y = Yes, N = No
5. **CASS Standardization Answer** is the expected return answer on the mailpiece.
6. **Special Flag** identifies the type of test address given.
7. **Customer Record Return** is the customer's answer with ZIP + 4 and barcode. IM Barcode tracking information: Barcode ID, Service Code, Mailer ID, Serial Number.
8. **#** indicates fatal ZIP + 4 add-on error (i.e., '0000'/'9999')
   ***** indicates delivery point error.
9. '**Y**' indicates misread/miscoded error for character recognition in street address information.
10. **ZIP + 4 Odd/Even/Both** indicates the ZIP + 4 range. 'Y' in this field indicates that the ZIP + 4 code has had transaction in the past 12 months as identifed by Z4CHANGE.
    O = Odd
    E = Even
    B = Both
    Y = Z4CHANGE

US POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM
NATIONAL CUSTOMER SUPPORT CENTER
CUSTOMER NO MATCH REPORT
ADDRESSES WHICH ARE GRADED AND SCORED

CUSTOMER NAME: USPS

CUSTOMER ID: 000040DCF

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED
JAMES B RYAN INC (1) 600 N 30TH ST # 3924 # 1117 CAMDEN NJ 08105	JAMES B RYAN INC (5) 600 N 30TH ST # 3924 # 1117 CAMDEN NJ 08105-1363 99	
(2)	(6) (10)	UNREA-DABL E
CASS KEY B9806679 / SIZE C / BARCODE N / Z9 N / CASE MIXED	FONT D / SPECIAL FLAG 07 / RECORD TYPE H / ZIP+4 ODD/EVEN/BOTH Y	RECORD TYPE / ZIP+4 ODD/EVEN/BOTH
INDIA GARMENTS 404 HACKENSACK ST # 2F # 3643 CARLSTADT NJ 07072	INDIA GARMENTS 404 HACKENSACK ST APT 2F # 3643 CARLSTADT NJ 07072-1313 26	
(3)		REJ
CASS KEY B9806779 / SIZE C / BARCODE N / Z9 N / CASE MIXED	FONT D / SPECIAL FLAG 08 / RECORD TYPE H / ZIP+4 ODD/EVEN/BOTH E	RECORD TYPE / ZIP+4 ODD/EVEN/BOTH
RADEY AND FULLER ASSOC 905 KINGS HWY N # 9788 # 1 CHERRY HILL NJ 08034	RADEY AND FULLER ASSOC 905 KINGS HWY N STE 1 # 9788 CHERRY HILL NJ 08034-1536 01	
(4)		(8) 08034-1536 99*
CASS KEY B9806780 / SIZE A / BARCODE N / Z9 N / CASE UPPER	FONT A / SPECIAL FLAG 08 / RECORD TYPE H / ZIP+4 ODD/EVEN/BOTH O	RECORD TYPE / ZIP+4 ODD/EVEN/BOTH
DOBBS ANNEX GENERAL DELIVERY ROCKWALL TX 75032	DOBBS ANNEX GENERAL DELIVERY ROCKWALL TX 75087-9999 99	- GENERAL DELIVERY
		(8) 75938-9999 99#
CASS KEY B9806877 / SIZE C / BARCODE N / Z9 N / CASE MIXED	FONT B / SPECIAL FLAG R0 / RECORD TYPE G / ZIP+4 ODD/EVEN/BOTH B	RECORD TYPE G / ZIP+4 ODD/EVEN/BOTH
JUNGLE FOWL VACATIONS HC 69 BOX 206 GRADY OK 73561-4598	JUNGLE FOWL VACATIONS HC 69 BOX 206 GRADY OK 73569-9601 06	- HC 69
		(7) 73561-9801 06
CASS KEY B9806940 / SIZE A / BARCODE N / Z9 N / CASE UPPER	FONT A / SPECIAL FLAG R2 / RECORD TYPE R / ZIP+4 ODD/EVEN/BOTH B	Y (9) / RECORD TYPE R / ZIP+4 ODD/EVEN/BOTH

FONT A SIZE A: ABCDE
FONT B SIZE A: ABCDE
FONT B SIZE C: ABCDE
FONT C SIZE A: ABCDE
FONT C SIZE C: ABCDE
FONT D SIZE A: ABCDE
FONT D SIZE C: ABCDE

USPS 47-2467

REPORT CII030P2

US POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM
NATIONAL CUSTOMER SUPPORT CENTER
CUSTOMER NO MATCH REPORT
ADDRESSES WHICH ARE GRADED AND SCORED

DATE: 07/16/2008
TIME: 20142477
PAGE: 1

CUSTOMER NAME: USPS

CUSTOMER ID: 004210TAA

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED
MARSH & MCLENNDEN (1) 356 FIRST STREET APARTMENT 3 HOBOKEN NJ 07030 (2)	BARCODE ID : 00 (5) SERVICE CODE: 700 MAILER ID: UNACCEPTED SERIAL NUMBER: UNACCEPTED	BARCODE ID : 00 (7) SERVICE CODE: 000 ** MAILER ID: 000000000 ** NOT ALLOWED SERIAL NUMBER: 000000000 ** NOT ALLOWED

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN
00077						A0 (6)					

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED
MARSH & MCLENNDEN 839 WILLOW AVENUE APARTMENT 2 HOBOKEN NJ 07030	BARCODE ID : 00 SERVICE CODE: 700 MAILER ID: UNACCEPTED SERIAL NUMBER: UNACCEPTED	BARCODE ID : 00 SERVICE CODE: 000 ** MAILER ID: 000000000 ** NOT ALLOWED SERIAL NUMBER: 000000000 ** NOT ALLOWED

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN
00104						A0					

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED
THOMAS WILSON 901 NE MESA ST OLATHE KS 66061	BARCODE ID : 00 SERVICE CODE: 700 MAILER ID: UNACCEPTED SERIAL NUMBER: UNACCEPTED	BARCODE ID : 00 SERVICE CODE: 000 ** MAILER ID: 000000000 ** NOT ALLOWED SERIAL NUMBER: 000000000 ** NOT ALLOWED

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN
03342						D0					

CASS RECORD GIVEN	CASS STANDARDIZATION ANSWER	CUSTOMER RECORD RETURNED
WOODCREEK CONDOS 29652 MIDDLEBELT RD UNIT 1401F FARMINGTON HILLS MI 48334	BARCODE ID : 00 SERVICE CODE: 700 MAILER ID: UNACCEPTED SERIAL NUMBER: UNACCEPTED	BARCODE ID : 00 SERVICE CODE: 000 ** MAILER ID: 000000000 ** NOT ALLOWED SERIAL NUMBER: 000000000 ** NOT ALLOWED

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN
07793						T6					

CASS KEY	SIZE	BARCODE	Z9	CASE	FONT	SPECIAL FLAG	RECORD TYPE	ZIP+4 ODD/EVEN		RECORD TYPE	ZIP+4 ODD/EVEN

CIM031 MAR 2000

FONT A SIZE A: ABCDE

FONT B SIZE A: ABCDE
FONT B SIZE C: ABCDE

FONT C SIZE A. ABCDE
FONT C SIZE C: ABCDE

FONT D SIZE A: ABCDE
FONT D SIZE C: ABCDE

Appendix 7:
Electronic Data File Description

Electronic Data File Description

The electronic error report for MASS is shown below in COBOL copybook format. The first seven lines are HEADER information.

Header Information:

```
****************************************
USPS 47-2467

REPORT CII030P2
CUSTOMER NAME:   ABC COMPANY
CUSTOMER ID:     05123OAAG
****************************************
```

Header Record:

```
01  CII030P2-REPORT-HEADER.
    05  P2-LINE-1.
        10  FILLER                  PIC X(300) VALUE ALL '*'.
    05  P2-LINE2.
        10 FILLER                   PIC X(05) VALUE SPACES.
        10 FILLER                   PIC X(12) VALUE 'USPS 47-2467'.
        10 FILLER                   PIC X(73) VALUE SPACES.
        10 FILLER                   PIC X(50) VALUE
        'US POSTAL SERVICE - CODING ACCURACY SUPPORT SYSTEM'.
        10 FILLER                   PIC X(71) VALUE SPACES.
        10 FILLER                   PIC X(06) VALUE 'DATE'.
        10 CII030P2-MM              PIC X(02).
        10 FILLER                   PIC X(01) VALUE '/'.
        10 CII030P2-DD              PIC X(02).
        10 FILLER                   PIC X(01) VALUE '/'.
        10 CII030P2-CC              PIC X(02).
        10 CII030P2-YY              PIC X(02).
        10 FILLER                   PIC X(08) VALUE SPACES.
    05  P2-LINE-3.
        10 FILLER                   PIC X(75) VALUE SPACES.
        10 FILLER                   PIC X(50) VALUE
        '    NATIONAL CUSTOMER SUPPORT CENTER    '.
        10 FILLER                   PIC X(71) VALUE SPACES.
        10 FILLER                   PIC X(06) VALUE 'TIME'.
        10 CII030P2-HH              PIC X(02).
        10 FILLER                   PIC X(01) VALUE ':'.
        10 CII030P2-MN              PIC X(02).
        10 FILLER                   PIC X(01) VALUE ':'.
        10 CII030P2-SS              PIC X(02).
        10 FILLER                   PIC X(01) VALUE SPACES.
    05  P2-LINE-4.
        10 FILLER                   PIC X(05) VALUE SPACES.
        10 FILLER                   PIC X(15) VALUE
        'REPORT CII030P2'.
        10 FILLER                   PIC X(70) VALUE SPACES.
        10 FILLER                   PIC X(50) VALUE
```

```
        '    ADDRESSES WHICH ARE GRADED AND SCORED    '.
        10 FILLER                   PIC X(95) VALUE SPACES.
    05  P2-LINE-5.
        10 FILLER                   PIC X(05) VALUE SPACES.
        10 FILLER                   PIC X(16) VALUE
        'CUSTOMER NAME: '.
        10 CII030P2-NAME            PIC X(40).
        10 FILLER                   PIC X(374) VALUE SPACES.
    05  P2-LINE-6.
        10 FILLER                   PIC X(05) VALUE SPACES.
        10 FILLER                   PIC X(16) VALUE
        'CUSTOMER ID: '.
        10 CII030P2-NUM             PIC X(9).
```

Data Record:

Data records will start in record 8 and follow this format:

```
01  ERR-RPT2-WORK-RECD.
    05  ERR-RPT2-CARR-CNTL         PIC X(01).
    05  ERR-RPT2-CASS-KEY          PIC X(08).

*----- ORIGINAL INPUT FIELDS ---------------
    05  ERR-RPT2-IFIRST-FIRM       PIC X(40).
    05  ERR-RPT2-IZIP              PIC X(10).
    05  ERR-RPT2-ICITY             PIC X(28).
    05  ERR-RPT2-ISTATE            PIC X(02).
    05  ERR-RPT2-ISEC-URB-FIRM     PIC X(30).
    05  ERR-RPT2-IDELADDR          PIC X(64).

*----- STANDARDIZED POSTAL ANSWER FIELDS ---------------
    05  ERR-RPT2-SFIRST-FIRM       PIC X(40).
    05  ERR-RPT2-SSEC-URB-FIRM     PIC X(40).
    05  ERR-RPT2-SADDRESS          PIC X(64).
    05  ERR-RPT2-SCITY             PIC X(28).
    05  ERR-RPT2-SSTATE            PIC X(02).
    05  ERR-RPT2-SZIP              PIC X(05).
    05  ERR-RPT2-SHYPHEN           PIC X(01).
    05  ERR-RPT2-SADDON            PIC X(04).
    05  ERR-RPT2-SDELPT            PIC X(02).
    05  FILLER                     PIC X(01).

*----- MISCELLANEOUS REPORT FIELDS ---------------
    05  ERR-RPT2-MCONTROL.
        10 ERR-RPT2-MCNTL-SIZE             PIC X(02).
*           Size values:     A      C
        10 ERR-RPT2-MCNTL-BARCODE          PIC X(01).
*           Invalid BARCODE Present on mailpiece in WIDEAREA
*           Values:          Y      N
        10 ERR-RPT2-MCNTL-ZIP9             PIC X(01).
*           Invalid ZIP+4 Present on mailpieces:
```

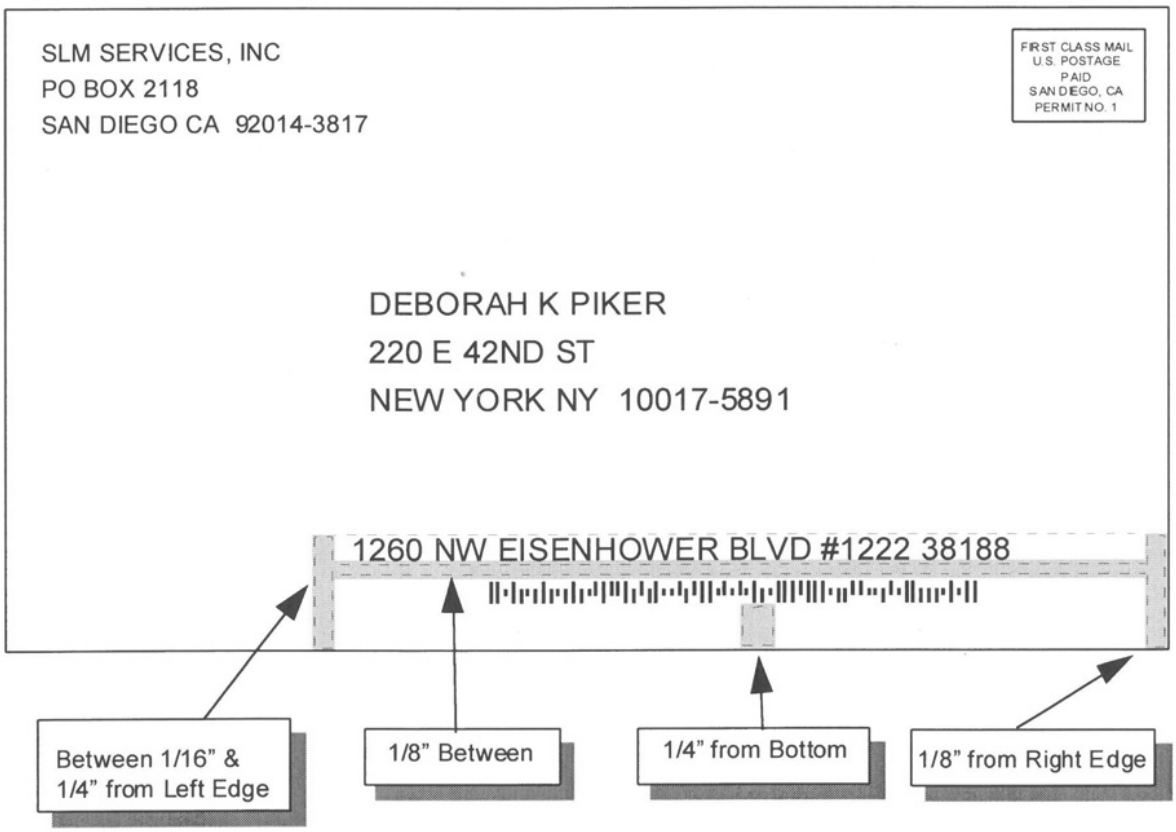
```
*            Values:          Y      N
          10 ERR-RPT2-MCNTL-CASE            PIC X(05).
*            Case values:     Upper  Mixed
          10 ERR-RPT2-MCNTL-FONT             PIC X(01).
*            Font values:     A      B      C      D
       05  ERR-RPT2-MRECTYPE                 PIC X(01).
       05  ERR-RPT2-FILLER1                  PIC X(01).
       05  ERR-RPT2-MSPECIAL                 PIC X(02).
       05  ERR-RPT2-MODDEVEN                 PIC X(01).

*----- CUSTOMER RETURNED ANSWER ---------------
       05  ERR-RPT2-CZIP                     PIC X(05).
       05  ERR-RPT2-CHYPHEN                  PIC X(01).
       05  ERR-RPT2-CADDON                   PIC X(04).
       05  ERR-RPT2-CDPBC.
           10 ERR-RPT2-CDPBC-ANS             PIC X(02).
           10 ERR-RPT2-CDPBC-CHKDGT          PIC X(02).
       05  ERR-RPT2-FILLER2                  PIC X(12).

*----- DATA RELATING TO CUST RETURNED ZIP+4 ANSWER ----------
*      This is the parsed information associated with the returned ZIP+4 from
*      the customer. It is taken from ZIP+4 information that may be different
*      from the customer's due to timing of the ZIP+4 data.
       05  ERR-RPT2-LINE1.
           10  ERR-RPT2-FIRM                 PIC X(50).
       05  ERR-RPT2-LINE2.
           10  ERR-RPT2-PRIMLO               PIC X(10).
           10  FILLER                        PIC X(03) VALUE ' - '.
           10  ERR-RPT2-PRIMHI               PIC X(10).
           10  FILLER                        PIC X(27).
       05  ERR-RPT2-LINE3.
           10  ERR-RPT2-PREDIR               PIC X(02).
           10  FILLER                        PIC X(01) VALUE SPACE.
           10  ERR-RPT2-STRNAME              PIC X(28).
           10  FILLER                        PIC X(01) VALUE SPACE.
           10  ERR-RPT2-SUFFIX               PIC X(04).
           10  FILLER                        PIC X(01) VALUE SPACE.
           10  ERR-RPT2-POSTDIR              PIC X(02).
           10  FILLER                        PIC X(11) VALUE SPACE.
       05  ERR-RPT2-LINE4.
           10  ERR-RPT2-SECUNIT              PIC X(04).
           10  FILLER                        PIC X(01).
           10  ERR-RPT2-SECLO                PIC X(08).
           10  FILLER                        PIC X(03) VALUE ' - '.
           10  ERR-RPT2-SECHI                PIC X(08).
           10  FILLER                        PIC X(26).
       05  ERR-RPT2-CRECTYPE                 PIC X(01).
       05  ERR-RPT2-CODDEVEN                 PIC X(01).
```

Appendix 8:

Guidelines for Printing LACS$^{Link®}$ Information

LACS$^{Link®}$ is mandatory for CASS/MASS certification and must be used in the production environment. When a new LACS-converted address is found, the new address must be shown. If the new address is not returned, only the 5-digit ZIP Code™ associated with the original input address can be returned. A mailpiece that uses only the 5-digit will not qualify for automation discounts.

Below is an example of a mailpiece with text information placement for MASS machines printing LACS^{Link} information:



Note: Example not to sclae.

Flats must comply with current *DMM*® Barcode Placement standards.

Refer to the LACS^{Link} Printing Guidelines posted at RIBBS®:

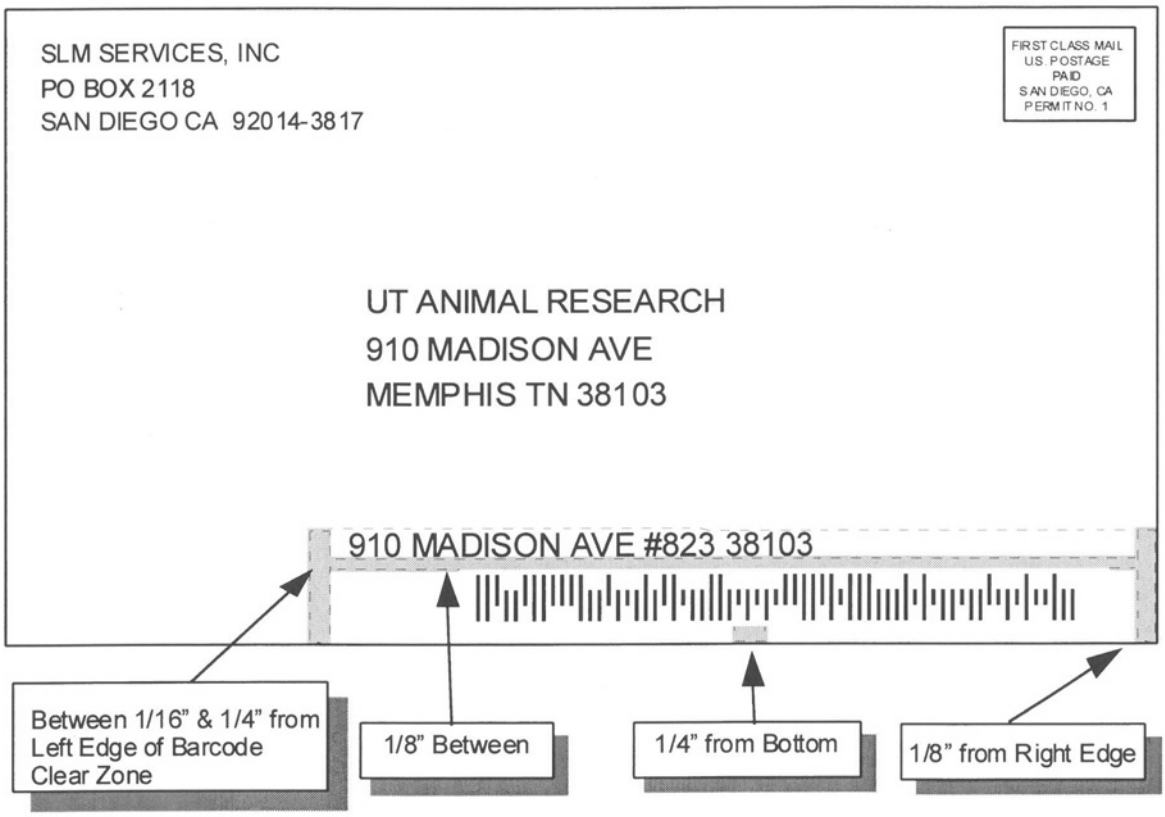
http://ribbs.usps.gov/cassmass/documents/tech_guides/CASS_CYCLE_M/PRINTING_GUIDELINES_LACSLINK.doc

Appendix 9:

Guidelines for Printing SuiteLink® Information

Suite$^{Link®}$ is mandatory for CASS/MASS certification and must be used in the production environment. When a new secondary number from Suite^{Link} is found, the suite number must be appended to the original address. If the secondary number is not appended, only the 5-digit ZIP Code™ associated with the original input address can be returned. A mailpiece that uses only the 5-digit will not qualify for automation discounts.

Below is an example of a mailpiece with text information placement for MASS machines printing Suite^{Link} information:



Note: Example not to scale.

Flats must comply with current *DMM*® Barcode Placement standards.