

precisely

CODE-1 Plus

User Guide for IBM i

Version 4.3.1



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1 - CODE-1 Plus Concepts

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What is CODE-1 Plus?

CODE-1 Plus is an address-matching and standardization system that improves the address data quality and deliverability of your mail to enable you to qualify for USPS postal discounts. CODE-1 Plus matches input addresses to the addresses in the CODE-1 Plus database to correct your postal information and add additional postal information. CODE-1 Plus helps you save money by helping you qualify mail for USPS automation-based discounts and carrier route discounts (Line of Travel based). You can use CODE-1 Plus to:

- Add, correct, or verify 5-digit ZIP Codes
- Correct or add the ZIP + 4 Codes
- Add Delivery Point Codes
- Add carrier route codes
- Standardize street, city, and state fields according to USPS conventions
- Validate addresses using the Delivery Point Validation (DPV) option
- Use the LACS^{Link} option to access USPS address conversion information and convert addresses as needed
- Use the Suite^{Link} option to improve business addresses deliverability by adding accurate secondary (suite) information to the business addresses in your mailing list
- Determine if an address is a business or residential address using the Residential Delivery Indicator (RDI) option
- Use the PreciselyID option to provide a unique and persistent identifier to reference an addressable location without storing the whole address string.
- Prevent “false positives” by using the Early Warning System (EWS)
- Qualify your standard letters and flats for USPS Enhanced Carrier Route rates by using Line of Travel.

You can perform these functions interactively (online) or in batch mode. Processing results are written to one or more output files, depending on your specifications.

What is Address Standardization?

The USPS has established guidelines for what it calls quality addressing. Quality addressing ensures standardized addresses that help the USPS provide timely mail delivery. This goal becomes even more critical when mailers attempt to qualify for postal discounts.

A standardized address is an address that has been matched against the CODE-1 Plus database and formatted based on USPS addressing conventions. CODE-1 Plus uses USPS conventions to ensure deliverability of your addresses. The USPS addressing conventions include guidelines for:

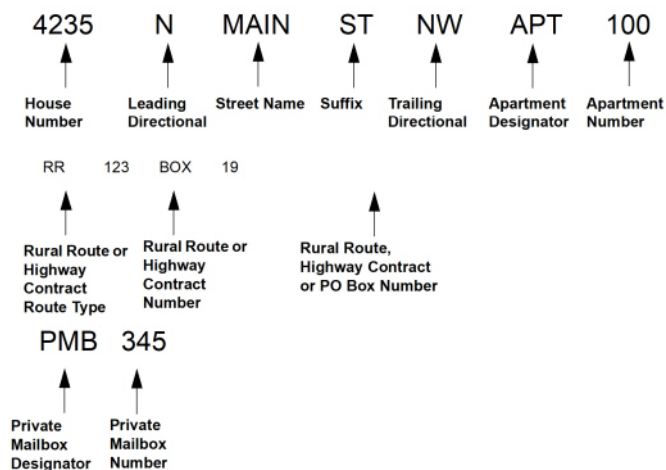
- Format
- Punctuation
- Address components

The first step to quality addressing is a healthy mailing list. CODE-1 Plus uses USPS address standardization guidelines set forth in USPS Publication 28 to correct your addresses and ensure your mail's deliverability.

For more information on address standardization, please see **Postal Addressing Standards, USPS Publication 28** at <http://pe.usps.gov/cpim/ftp/pubs/pub28/pub28.pdf>. You can order this publication from:

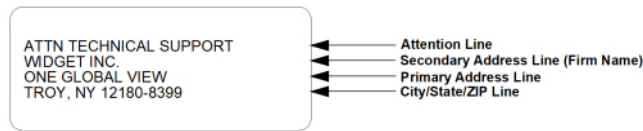
NATIONAL CUSTOMER SUPPORT CENTER MEMPHIS TN 38188-0001 (800) 238-3150

CODE-1 Plus considers the address to be only the street, and considers the city/state/ZIP Code to be additional information—separate from the address. For this reason, when we refer to an address in this book, we mean any or all of the following elements shown in the figure below:



Address Components

Address elements and city/state/ZIP information combine to make lines. For the purposes of this product, these lines are defined as shown in the figure below:



Address Lines

The USPS allows the following placements for suite/apartment numbers:

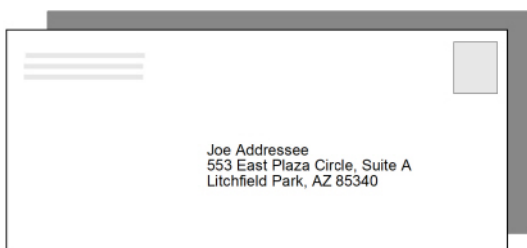
- On the primary address line (just above the city/state/ZIP line), following the street information
- On the secondary address line (just above the primary address line), by itself
- On the secondary address line, with the secondary address line information.

CODE-1 Plus recognizes both apartment/suite designators and apartment/suite numbers on both secondary and primary address lines, and formats those accordingly.

In standardizing or normalizing an address with a Private Mailbox (PMB), CODE-1 Plus puts the PMB designator and number on the secondary address line if a secondary address line is provided. If a secondary address line is not provided and CODE-1 Plus finds a PMB, then CODE-1 Plus attempts to append the PMB designator and number to the primary address line. If there is not enough room on the primary address line, CODE-1 Plus drops the PMB designator and number. For more information on using this option to verify PMB/MSD data, refer to [Using Delivery Point Validation](#).

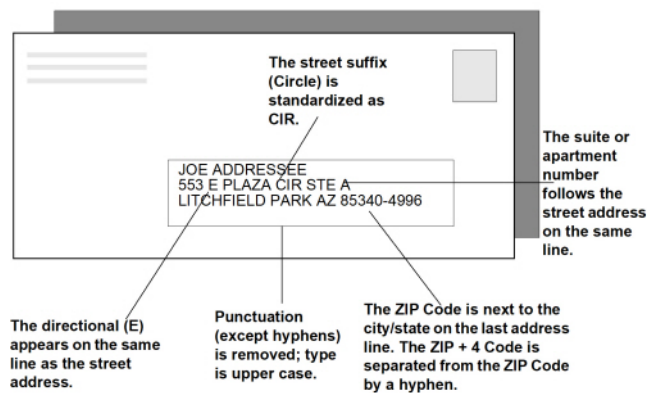
Since there is no PMB data on the postal database, CODE-1 Plus will not attempt to correct or verify PMB information. However, if you have the DPV option, it is possible to verify some PMB information by providing Commercial Mail Receiving Agency (CMRA) return codes. For more information on CMRAs, refer to "DPVOUT" in "Parameter Reference" in your **CODE-1 Plus Reference Guide**. The following figures provide a standardization example. For a detailed discussion and more examples for address standardization, refer to **USPS Publication 28**.

The original address is:



Example Address on Envelope

For automation compatibility, the USPS prefers the address to appear as:



USPS Preferred Address on Envelope

What is the Matching Process?

During address matching and standardization, address lines are separated into components (analyzed), and compared to the contents of the CODE-1 Plus database. Any address information not used as part of matching is referred to as dropped address information. If a match is found, the input address is standardized according to the contents of the database.

If no database match is determined, CODE-1 Plus provides the option to normalize input addresses. The normalization process attempts to format the address lines according to conventions outlined in USPS Publication 28. When the normalization option is invoked and no database match is found for a particular address, CODE-1 Plus attempts to recognize the individual elements and formats them according to USPS conventions.

Understanding the CODE-1 Plus Database

The CODE-1 Plus database contains virtually every house number range in the U.S. CODE-1 Plus ensures that your addresses are correct and in the USPS-specified format. Optionally, CODE-1 Plus stores match results and return codes relating to each input address. These include match results for the following:

- ZIP Codes
- ZIP + 4 Codes
- Carrier route codes

- Standardized address line and/or elements
- City names and state abbreviations
- Normalized address lines
- Address match return codes

The return codes help you to flag errors in your input file and allow you to select or reject processed addresses based on your job requirements.

What is CASS Certification?

The USPS Coding Accuracy Support System (CASS) measures the accuracy of address-matching software. To receive automated processing discounts, you must use software that has been CASS-certified and registered by the vendor with the USPS. The following regulations apply:

- The address-matching software used must have been CASS-certified for the current CASS cycle.
- Coding of each file must be performed at least annually (e.g., the mailing date must be within one year of the coding date).
- The database used during an address-matching run must be “current.” A current database is defined by the matrix in DMM 708.
- USPS Form 3553 lists the address-matching software used to process the mailing list. This report must be submitted with each mailing and must represent all address lists used to generate that mailing.
- CODE-1 Plus includes LACS^{Link}, DPV, and Suite^{Link} processing. For further details regarding the options and requirements for CASS certification, see the USPS-issued document on CASS Cycles on the <https://postalpro.usps.com/> website. CODE-1 Plus does not produce a CASS statement if LACS^{Link}, DPV, or Suite^{Link} processing is turned off.

Certifying Your Configurations

If you do not use one of the configurations certified by Precisely, or if you are calling CODE-1 Plus from your own application, you will have to certify the configurations you are using in order to qualify for mailing discount rates.

Before undertaking your own CASS certifications, serious consideration should be given to support, audit, and on-going testing for CASS. The standard maintenance and support agreement does not provide support for clients obtaining their own certification or NCOA approval.

You can obtain support from our Professional Services Group for your own certification or NCOA approval. Please contact your local sales or support representative for details.

Note: Your product license agreement may not permit you to obtain your own certification. Please review your software agreement for scope and use of CODE-1 Plus.

When ordering the CASS materials from the USPS, you can request:

- Stage 1 (self-measurement) media
- Stage 2 (certification test) media
- Both media

You are encouraged to order both media, and to experiment with the Stage 1 File until you are satisfied with the results. During this process, examine the returned address elements returned by CODE-1 Plus that differ from those the USPS views as “correct.”

When you submit your Stage 2 test, the USPS will probably require you to submit the “parameters used for matching.” To satisfy this requirement, you should set up a job for CASS, and submit the parameter list produced by the job to the USPS.

Use the “CASSA1” parameter to fill in the CASS-certified company name, software name, and software version if you attempt CASS certification with CODE-1 Plus (using our batch driver C1BM00) and have your company and/or software name on record with the USPS as a CASS-certified company.

Certified Configurations

USPS Form 3553 is required to include the specific configuration of the address-matching software that was used in the mailing. This specific configuration must have been CASS-certified. CODE-1 Plus automatically produces USPS Form 3553 when the parameters are set to a certified configuration.

Warning: If you use CODE-1 Plus with an uncertified configuration, CODE-1 Plus does not produce a USPS Form 3553. It is against USPS regulations for address-matching software to produce a USPS Form 3553 when uncertified configurations are used. If you use uncertified configurations, CODE-1 Plus generates a message telling you that the configuration is not certified, and that no form was printed.

Precisely has CASS-certified the following configurations.

Parameter	Position/Value	Description
AM OUT	8-10 blank	USPS record type.

Parameter	Position/Value	Description
CONFIG	8 M (default) 10 M (default) 12 M (default)	Strictness code for street name match, firm name match and directional/suffix match must all be medium.
CS OUT	19 Blank (default) I	Store the information in position 72. Store the input city.
CS OUT	59 Z	Store the ZIP + 4 File preferred last line city name (override city name).
DPVIN		DPV must be invoked to produce USPS Form 3553.
FIRMNM		The FIRMNM parameter is required when you use the STELNK parameter.
LACS		LACSLink must be invoked to produce a USPS Form 3553.
SA2OUT	15 Y	Perform preferred alias processing.
SA OUT	51 N	Return the base street name.

Parameter	Position/Value	Description
STELNK		<p>You must invoke Suite^{Link} processing to produce USPS Form 3553.</p> <p>You must specify “S” (default) in STELNK position 8. If you specify “I” or “W” in position 8, CODE-1 Plus does not generate a USPS Form 3553. The value in position 8 determines whether to shut down when Suite^{Link} reports an error.</p> <ul style="list-style-type: none"> • I — Ignore error and continue to attempt Suite^{Link} processing. CODE-1 Plus does not generate a USPS Form 3553 (USPS CASS Summary Report) if you specify the value “I”. • S — Shutdown when Suite^{Link} reports an error (default). Specify the value “S” if you want to generate a USPS Form 3553 (USPS CASS Summary Report). • W — Issue warning message and turn off Suite^{Link} processing. CODE-1 Plus does not generate a USPS Form 3553 (USPS CASS Summary Report) if you specify the value “W”. <p>Note: The FIRMNM parameter is required when you use the STELNK parameter.</p>

A non-CASS configuration is determined if the maximum probability of correctness indicators are not the same for all the parameters. The following table provides descriptions of all non-Cass configurations.

Parameter	Position/Value	Description
AE OUT	64 X	Store all Private Mailbox Designator.

Parameter	Position/Value	Description
AM OUT	8-10	Location for USPS record type code is specified.
BYPEXP	1-6 BYPEXP	Override expired US Postal database.
CONFIG	8, 10, 12	Any other combination of strictness codes other than MMM (Ex. MEM, EEE, TEM, etc.).
CONFIG	14 Y	Accept multiple matches.
CONFIG	38 P	For dual address match, return a PO Box match regardless of address line.
CONFIG	40 X	For unique ZIP Code handling, store the input ZIP Code.
CONFIG	42 X	For PMB handling, store all private mailbox numbers.
CONFIG	44 N	For enhanced high rise alternate matching, do not attempt to match to the base record.
CONFIG	46 N	For multiple secondary component processing, assign default ZIP + 4 Code.
CONFIG	49 X	Return vanity city names when they most closely match input city (a CASS certified configuration will be created but will not be eligible for postal automation presort discount).

Parameter	Position/Value	Description
CONFIG	53 X	For limited locality option, limit address match to ZIP Code locality.
CONFIG	55 N	Do not perform split indicia processing.
CS OUT	19 Z	Store the primary city for the valid input ZIP Code.
CS OUT	59 C P	Store the USPS-preferred City Name from USPS City/State File. Store the Primary City Name from the USPS City/State File.
DPVIN	8 N	Do not attempt to DPV confirm if the input file contains multiple matches of the ZIP Code and the PO Box or rural route/highway contract.
DPVIN	10 N	Do not attempt to DPV confirm if the input file contains multiple matches of the ZIP Code and the street address type.
DPVIN	12 N	Do not attempt to DPV confirm if the input file contains multiple matches of the Carrier Route in CODE-1 Plus.
DPVIN	14 N	Do not attempt to DPV confirm if the input file contains multiple matches of the directional.
DPVIN	16 N	Do not attempt to DPV confirm if the input file contains multiple matches of the suffix.

Parameter	Position/Value	Description
DPVIN	18 N	Do not attempt to DPV confirm if input file contains multiple matches of the suffix/directional correction.
DPVIN	20 N	Do not attempt to DPV confirm if input file contains multiple matches of the secondary components with no designator.
DPVIN	22 N	Do not perform DPV validation using the ZIP+4 assigned by CODE-1 Plus during regular processing.
DPVIN	24 N	Do not perform DPV validation using secondary information.
DPVIN	52 N	<p>DPVIN position 52 (RDI Indicator) indicates whether to perform RDI processing:</p> <ul style="list-style-type: none"> • Blank — Perform DPV processing only. • Y — Attempt both DPV and RDI processing. • N — Do not attempt DPV processing. Perform RDI processing only. If you specify "N" in position 52, CODE-1 Plus does not generate a USPS Form 3553.
SA OUT	69 M	For multiple standardized address matches, store the standardized address anyway.
SA2OUT	15 N (default)	Do not perform preferred alias processing.
SA2OUT	50 A	Return alternate address.

Parameter	Position/Value	Description
Z5 OUT	66 X	For unique ZIP Code handling, store the information indicated in position 72.

Total Solution

CODE-1 Plus can be used with other Precisely products as the first step to a total postal discount and list management solution. Once you have processed a file with CODE-1 Plus, you can:

- Use the CODE-1 Plus reports and return codes to determine the quality of your input file.
- Use the Precisely MailStream Plus software to obtain automation, carrier route, and additional presort discounts such as machinable and non-automation presort rates.
- Use MAIL360 to generate Intelligent Mail® Barcodes.
- Use Residential Delivery Indicator to help you make informed shipping decisions by identifying whether a delivery type is classified as residential or business (especially helpful for parcel shippers and rate analysis agents).
- Use List Conversion Plus to easily convert rented or purchased mailing lists from one format to another more usable format.

CODE-1 Plus Overview

CODE-1 Plus is divided into a batch component and an interactive component.

Using the Batch System

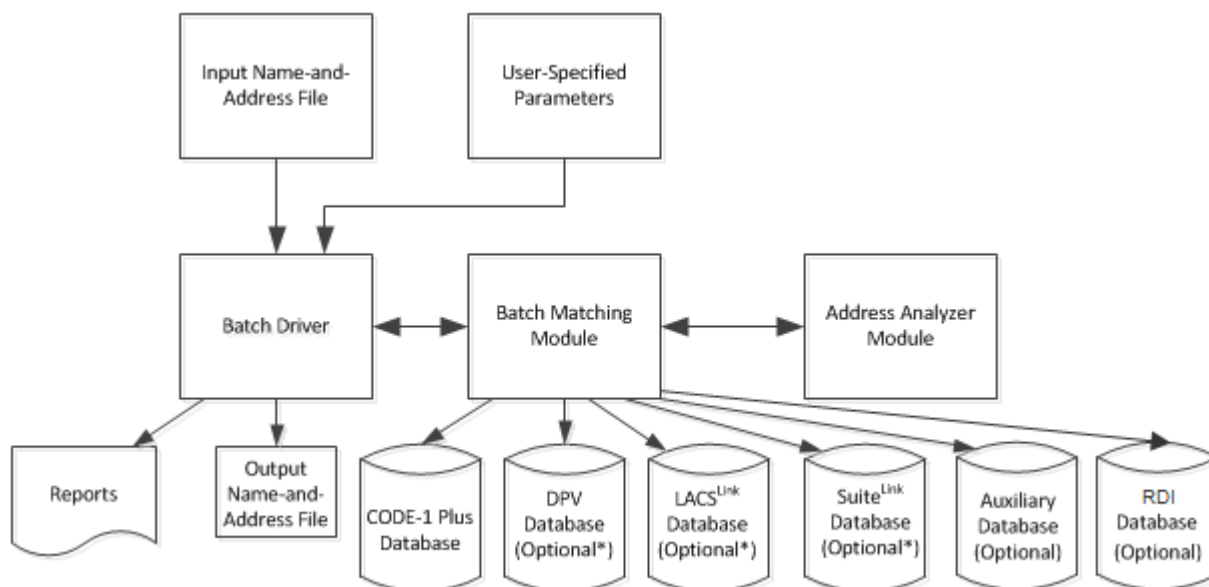
The batch system enables you to:

- Process a name-and-address file
- Create, edit, and save CODE-1 Plus parameters

- Submit CODE-1 Plus jobs
- Generate output file(s)
- Generate reports
- Download and reduce the size of the CODE-1 Plus Database

Component	Description
Batch Driver (C1BM00)	<p>Acts as the “engine” by coordinating the matching and output engine processes.</p> <p>The standard C1BM00 driver program allows for 200 list codes, and requires 390 K of memory. An identical C1BM00XL driver program allows for up to 10,000 list codes, and requires 2.25 MB of memory to run. To take advantage of the additional list code processing, change your control language appropriately.</p>
Address Analyzer Module	Analyzes each input record for use by the matcher.
Batch Matching Module	Matches the analyzed elements to the database to determine address matches.

The figure below provides an overview of the CODE-1 Plus batch components



* Required to generate USPS Form 3553.

File Names

File Name	Description	System File Name Assignment
City Database File	CODE-1 Plus City database file.	CITYDB
County Names Database File	CODE-1 Plus USPS County Names database file.	COUNTY
Customization File	Site customization file for online.	G1CPFDF
Delivery Point Validation Files (DPV)	Delivery Point Validation system files	<ul style="list-style-type: none">• DPVDB for Flat DPV DB• DPVHDB for Full DPV DB• DPVSDB for Split DPV DB
Details Database File	CODE-1 Plus Details database file.	DTLDB
Enhanced Street Matching (ESM) File	Enhanced Street Matching file	C1STRDB
Input Name-and-Address File	Contains the records that you want to correct using CODE-1 Plus.	C1BMNAM
Input Parameter Record File	Contains the parameters that define your batch job requirements. These parameters are discussed later in this chapter.	C1BMPRM

File Name	Description	System File Name Assignment
Invalid ZIP Code Unmatched Output File	Contains the records with invalid ZIP Codes that did not match against the CODE-1 Plus database.	C1BMIZP
LACS Database File	LACS ^{Link} database file	LLKDB
Line of Travel File	CODE-1 Plus Line of Travel database file	LTMASSTR
Locality Database File	CODE-1 Plus Locality database file.	LCLDB
Output 3553	USPS Form 3553.	PRNTCAS
Output Execution Log File	Contains the Execution Log.	PRNTXLG
Output Matched Records File	Contains all the records that CODE-1 Plus matched with the CODE-1 Plus database and then verified and corrected.	C1BMCOK
Output Reports File	Contains the CODE-1 Plus reports, including the standard Parameter Record Listing, Control Totals, and Form 3553.	PRNTRPT
Output Statistics File	Contains all information currently available in CODE-1 Plus generated reports (with the exception of percentages).	C1BMSTA
Output Unmatched Records File (Uncoded)	Contains the records with valid U.S. ZIP Codes that did not match against the CODE-1 Plus database for some reason.	C1BMNCO

File Name	Description	System File Name Assignment
PreciselyID File	PreciselyID database file	PRCSLYDB
Preferred/Abbreviated Database File	Preferred/Abbreviated database file	C1PAL2
Residential Delivery Indicator File (RDI)	Residential Delivery Indicator (RDI) file	RDIMSTR
Suite ^{Link} Database File	Suite ^{Link} database file	SLKDB
Z4CHANGE Option Database	Z4CHANGE USPS database.	Z4CHNG
ZIP + 4 Coded Output File	Contains all the records to which CODE-1 Plus standardized the ZIP + 4 Codes.	C1BMZP4
ZIP Index Database File	CODE-1 Plus ZIP Index database file.	ZIPIDX

System Components

When you type specifications for your input name-and-address records and for the layout and contents of the output records, the batch system generates one or more output files of matched, standardized name-and-address records. The are seven main components of batch CODE-1 Plus are described in the following sections.

Defaults for Print Output

The Defaults for Print Output component allows you to specify the headers, footers, date, and the number of lines to print on each page of the CODE-1 Plus reports.

Reformat Input Record

The Reformat Input Record component allows you to rearrange the components of your input records before the record is processed. The information you identify is copied, but not removed, from its original location in the input record. This feature is useful for saving data that might otherwise be overwritten by data returned from CODE-1 Plus. A maximum of 100 MOVE I operations can be defined for a job. The move operations are processed one at a time, in sequence.

Name/Address File Layout

The Name/Address File Layout component allows you to specify information about the layout of the data in the input name-and-address records.

Name/Address Record Posting

The Name/Address Record Posting component allows you to define the content and layout of your output records.

Reformat Output Record

The Reformat Output Record component allows you to rearrange pieces of the output record before the record is written to the output file. CODE-1 Plus:

- Processes the record
- Copies the record to an output record array
- Copies the entire record to a temporary work area (if requested)
- Copies data from a specific location in the work area back to a specific location in the output record array
- Writes the information directly to your output file (or passes the information to an output exit routine).

You can define a maximum of 100 MOVE O parameters for a job. The move operations are processed one at a time, in sequence.

Report Selection

The Report Selection component allows you to determine the CODE-1 Plus reports to print when you submit your job. Some reports are required and print for every job. You can select the optional reports to print with your job.

Submit Batch Job

The Submit Batch Job component allows you to submit a job to:

- Match your input records
- Create your output records
- Generate your reports

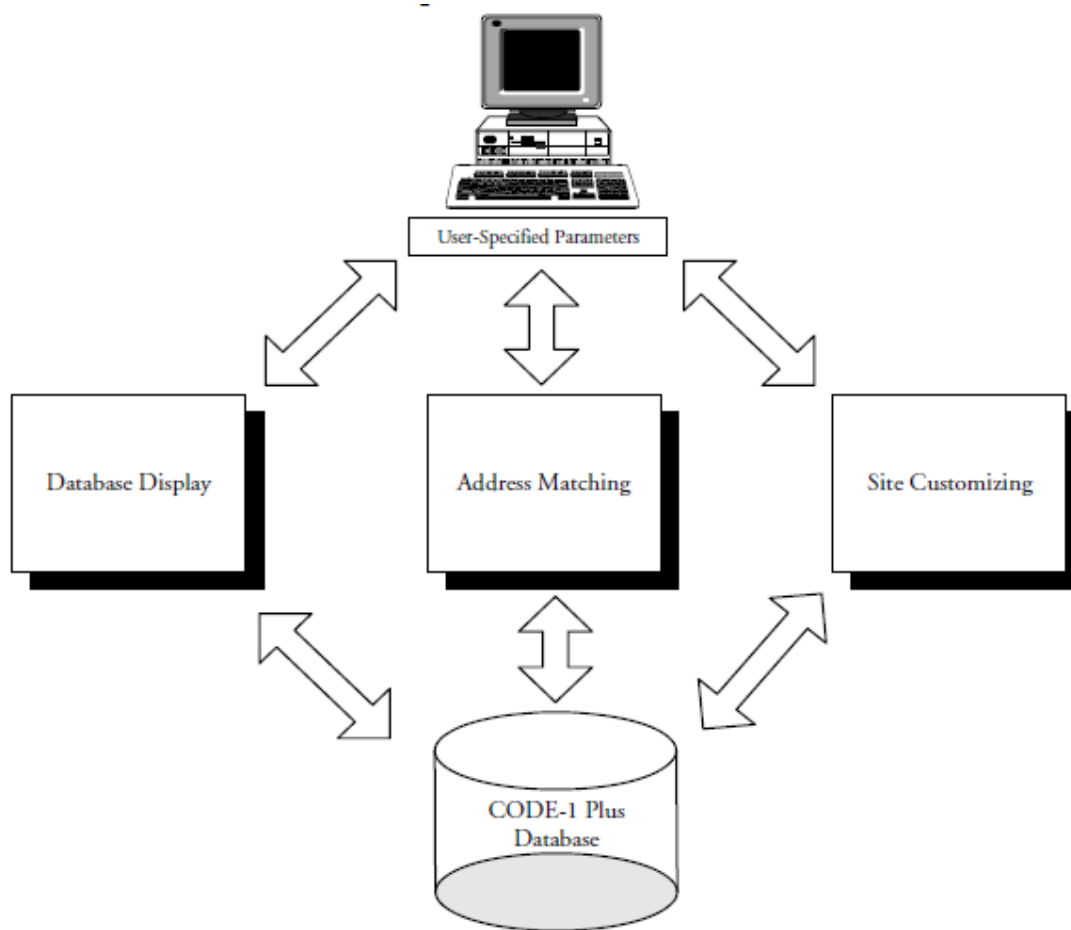
This component allows you to limit the number of records processed during the job. Limiting the number of records processed during the job can be particularly useful when you want to test the specifications you have defined for your job.

The Interactive System

The interactive system enables you to perform three functions:

- Address matching
- Database inquiry
- Site customization

Address matching, database display, and site customization components operate independently of the CODE-1 Plus batch driver. Use address matching as part of your own (or other vendor) applications. The figure below illustrates the relationship of the interactive CODE-1 Plus components.



For more detailed information on the CODE-1 Plus Interactive System, refer to [Getting Started With the Interactive System](#).

Address Matching

Interactive address matching enables you to:

- Match a single input address against the master file.
- Analyze return codes to determine the actions taken when attempting a match.
- Detect the types and quantities of problems encountered in an input address.
- Control the closeness (“tightness” or “looseness”) of address matches.

Additionally, the address matching function provides access to the Precisely Geographic Coding Plus screen where you can access geographic match results for the ZIP and ZIP + 4 Code from your address matching attempt.

Database Inquiry

Database inquiry lets you browse the contents of the CODE-1 Plus database. Using this feature, for any city on the CODE-1 Plus database, you can display the following information:

- Street Information — Leading directional, street names, street suffixes, post-directional, and ZIP Codes.
- House Information — Even/odd house number ranges, ZIP Codes, ZIP + 4 Code ranges, carrier routes, USPS record types, alias information, and firm names
- Firm Information — House and apartment number ranges, firm names, ZIP Codes, ZIP + 4 Codes, and carrier route codes.
- Apartment Information — Apartment number ranges, ZIP Codes, ZIP + 4 Codes, carrier route codes, USPS record types, apartment types, and number of firms.
- ZIP Code Information — Long/short city names, state codes, and city types.
- City Information — City names, state codes, ZIP Code ranges, city type codes, urbanization indicators, and unique ZIP indicators.

Site Customization

Site customization enables you to do the following:

- Update access passwords
- Change site-specific default values.

For more detailed information on the CODE-1 Plus Interactive System, refer to [Getting Started With Interactive Processing](#).

Other CODE-1 Plus Programs and Modules

CODE-1 Plus also provides you with program modules, callable routines, and executable programs for flexible use of CODE-1 Plus with your own applications.

Program Modules

The program modules enable you to analyze and match input addresses and add ZIP + 4 Codes and carrier routes to your addresses. For more information about these program modules and call areas, refer to your **CODE-1 Plus Reference Guide**. There are platform limitations for the different C1MATCHx memory models.

Module	Description
C1MATCHI	Address matcher for interactive processing.
C1MATCHB	Default address matcher for the batch environment (using 3 MB of memory).
C1MATCHS	Matcher for batch processing uses 1 MB (small memory model).
C1MATCHM	Matcher for batch processing uses 6 MB (medium memory model).
C1MATCHL	Matcher for batch processing uses 12 MB (large memory model).
C1MATCHH	Matcher for batch processing uses 28 MB (huge memory model).
C1ANZADR	Analyzes the elements of an input address, so that the elements can be used by C1MATCHx for matching purposes. If an address cannot be matched against the CODE-1 Plus database, it can be normalized to standard address formats.

To use a module, pass, as parameters, the names of pre-defined call areas. These call areas give the module all the information necessary to perform the function accurately and return the appropriate

information. RPG copybooks are available in the Source member that is used in your program to define the call areas.

Two other input call areas are available for IBM i users. G1CP has no calling parameters and accesses the combined interactive database match/inquiry screens available from the **Work with Jobs** screen. G1CP1 has no calling parameters and accesses the interactive database inquiry screen in Flip mode positioned at a city name of your choice.

Callable Routines

CODE-1 Plus includes the following callable routines.

Module	Description
C1BMCBD	Enables you to produce a sample CASS report with a callable version of the CODE-1 Plus matcher. Current USPS regulations require any user-written program calling CODE-1 Plus for the purpose of claiming automation discounts to undergo CASS certification. Therefore, the user-written program must generate and print the USPS Form 3553, not use the sample generated by C1BMCBD.
C1PRPT	Enables you to print CODE-1 Plus reports without using the CODE-1 Plus batch driver.
C1CTYLKP	Enables you to match ZIP Codes to city/state combinations.
C1CTYLKC	Enables you to match ZIP Codes to city/state combinations from your own CICS application.
EXTADDR2	Enables you to separately call a six-line address extractor.
G1CPLKB	Enables you to browse the contents of the CODE-1 Plus database from batch applications.
G1STATW	Enables you to create statistical file records.

Module	Description
C1P430	Enables you to process only those input records that have not been coded by CODE-1 Plus with the most recent changes according to the USPS Z4CHANGE product.
C1PDR	Enables you to build a reduced-size database from a previously installed CODE-1 Plus database (disk).
LTO10	Enables you to assign Line of Travel information to input records.

To use these callable routines, pass, as parameters, the names of pre-defined call areas. These call areas give the routine all the information necessary to perform the function accurately and return the appropriate information. For more information, refer to "CODE-1 Plus Callable Subroutines" in your **CODE-1 Plus Reference Guide**.

Executable Programs

The executable programs include the following:

Executable Program	Description
G1CPDFL	Provides various functions related to the interactive system file G1CPDFD. It can initialize or repair the file, and can be used to display the encrypted password stored on the file's ADMIN record. For more information about G1CPDFL and the customization file, refer to Customization File Administration .
G1G001	Enables you to print detailed reports using your coded record output file. To execute the module, you define parameters. The parameters enable you to define the input file; headers and footers to print on the reports; column headers; report layout and content; and records to select based on input record values. For more information on G1G001, refer to "Using G1G001" in your CODE-1 Plus Reference Guide .

Executable Program	Description
G1AUXBLD	Allows you to build an Early Warning System (EWS) auxiliary file.
C1DBRDI	Allows you to build an Residential Delivery File (RDI) to conduct RDI processing.
C1PDRDSK	Allows you to create a reduced or regional CODE-1 Plus database from a previously installed CODE-1 Plus database (disk). If you process name-and-address records in a limited geographic region of the United States, building and using a reduced database can save you a significant amount of disk space. For more information about reducing your database, refer to Creating a Reduced CODE-1 Plus Database .
C1DBSTSZ	Produces the CODE-1 Plus State Sizes Report. Using this program, you can determine the total size, in bytes, of the CODE-1 Plus database and the approximate sizes for each state's data. The total size of the database is not equal to the sum of the state sizes, because there is global data that is common to all states. For more information about the State Sizes Report, refer to Generating Reports .
C1PDBPRT	Enables you to produce the CODE-1 Plus Database Print Report. Using this program, you can select up to 100 ZIP Code ranges and then print the addresses from the database residing within those ranges. You can produce reports with information relative to a single ZIP Code or a range of ZIP Codes. For more information about the State Sizes Report, refer to Generating Reports .
G1DBLOAD	Enables you to create a generic database load program.
G1DBTAP2	Copies complete or reduced databases to media files.

Database Expiration

The CODE-1 Plus database expires regularly in accordance with USPS regulations outlined in DMM 708. When your CODE-1 Plus database is within 45 days of the expiration date, the following message appears on your Parameter Record Listing Report in batch and on the CODE-1 Plus Interactive screen:

* WARNING: THE CODE-1 PLUS MASTER FILE WILL EXPIRE IN 36 DAYS ON MM/DD/YYYY

* CONTACT Precisely CUSTOMER SUPPORT IF ASSISTANCE IS NEEDED

If your database expires (i.e. it is not current as defined by the DMM 708 matrix), CODE-1 Plus will not run. In batch mode, the Parameter Record Listing Report prints with the following message:

* CODE-1 Plus Master File EXPIRED on MM/DD/YYYY

The interactive matcher ceases to function in accordance with the Domestic Mail Manual (DMM) A960 matrix. The interactive system inquiry area, however, remains available even after the interactive matcher expires. In this case, the following message will be displayed on the prompt line above the function key descriptions:

CODE-1 PLUS DATABASE IS EXPIRED

You can, however, use the EXTEND command to bypass the expiration date in the interactive system.

You can use the BYPEXP parameter to override an expired database and run a job. However, a USPS Form 3553 will not be produced. The following message prints.

* USPS FORM 3553 SUPPRESSED DUE TO BYPASSING DATABASE EXPIRATION DATE CHECK

* *****

For more information on the BYPEXP parameter, refer to "Parameter Reference" in your **CODE-1 Plus Reference Guide**.

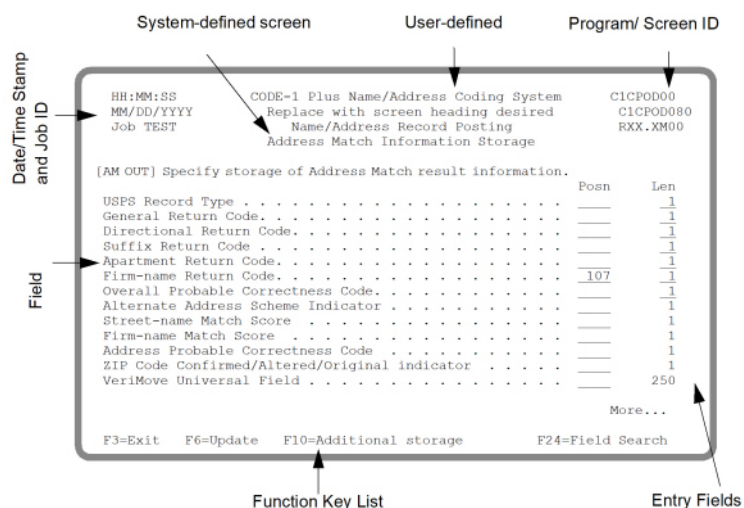
The Delivery Point Validation (DPV) option will stop working at the end of the fourth month from the release of the database.

If you have an expired DPV database, this message will appear:

DELIVERY POINT VALIDATION SUPPRESSED DUE TO DATABASE EXPIRATION DATE CHECK

Screens

Each component of CODE-1 Plus consists of a series of screens. Each screen contains fields into which you type specifications about your job. To move from screen to screen within the CODE-1 Plus System, use the function keys. A sample screen is shown below.



Screen Components

The main elements that make up each screen are:

- Program and screen IDs
- Release number
- Date/time stamp
- Job ID
- User-defined system heading
- System-defined screen heading
- Fields
- Function keys

Program and Screen ID

The program and screen IDs are located at the upper right of the screen. The program ID identifies the program for this screen. The screen ID is a unique label that identifies the screen.

Character	Name	Meaning	Possible Values
1-4	System ID	Identifies what Precisely IBM i system this screen is a part of.	<ul style="list-style-type: none">• C1CP — Batch system• C1IN — Database installation

Character	Name	Meaning	Possible Values
5-6	Module ID	Identifies what module within CODE-1 Plus this screen is a part of (the modules are usually the component name).	<ul style="list-style-type: none"> • NJ — Create New Job • CJ — Copy Job • RJ — Rename Job • MM — Work with Jobs (main menu) • DS — Define and/or Submit • PX — Defaults for Print Output • F3 — Exit Confirmation • OD — Name /Address Record Posting • ID — Name/Address File Layout • MI - Reformat Input Record • MO - Reformat Output Record • CF — Confirmation Compare Values • RP — Report Selection • SB — Submit Batch Job • IP — Copy from an external file • OP — Copy to an external file • DB — Database Functions • DR — Create reduced database
7-9(screen ID only)	Screen Number	Identifies the screen within the module.	Any 2- or 3-digit number

For example, the program ID on the previous page is C1CPOD00, and the screen ID in **Screens** is C1CPOD080.

Note: The screen numbers are not always in sequence or continuous. For example, if the screen ID is C1CPOD18, that does not mean that this is the 18th screen in the **Name/Address Record Posting** component. Also, it does not indicate that there are 18 screens total in the **Name/Address Record Posting** component. Numbers are used for identification only.

Release Number

The release number is at the top right corner of the screen, directly below the screen ID. This tells you the software release and modification level of CODE-1 Plus. In our sample screen in Figure 3, the release number is RXX.XM00.

Note: Screen examples in this book do not show the release number. This is done to avoid unnecessary updates to the documentation when there is a new release of the software and the screens have not changed.

Date/Time Stamp

The date/time stamp, located in the upper left corner of the screen, shows you the current date and time. In our sample screen in Figure 3, the time is HH:MM:SS and the date is shown as MM/DD/YYYY.

Note: The date/time stamp reflects the time at which the screen was “drawn,” and will not change until you press a key that causes the screen to change. For example, if you were interrupted in the middle of your work, and came back to your terminal after a few minutes, the date/time stamp would not represent the current time.

Job ID

The job ID, located just below the date/time stamp in the upper left corner of the screen, uniquely identifies this CODE-1 Plus job. It is not unique to a specific screen; while you are working with a particular job, that job ID is displayed on every screen. In Figure 3, our job ID is “TEST.”

Note: In our example screens throughout the rest of this book (except the tutorial), we do not show the job IDs.

User-Defined System Heading

The user-defined system heading is always “Replace with screen heading desired” unless you change it. The user-defined system heading is not unique to a particular screen or job — the same heading will be displayed on each screen, regardless of the screen ID or job ID. This feature is provided so that you may customize the CODE-1 Plus screen to contain your company's name or a slogan across the top. You can enter "CN" from the Main Menu to change the User-Defined Screen Heading.

System-Defined Screen Heading

The system-defined screen heading tells the name of the specific screen that is displayed on your monitor. In addition to the screen heading, there is often a subheading that more uniquely identifies the screen. For example, all of the screens in the Name/Address Record Posting component have “Name/Address Record Posting” as the main system-defined screen heading, but only one screen has the subheading, “Address Match Information Storage.”

Fields

Fields are underlined “blanks” on the screen for you to fill in with information. Each field is labeled with a field name, and has space for you to type data. You enter all of the information about your CODE-1 Plus job through fields. Some fields are optional, and some fields have default values that are used if you leave them blank.

Note that there is complete online help for each field (with the cursor in a field, simply press F1 or Help). On our sample screen, the first field has the name “USPS Record Type” and has space for you to type up to a 4-digit location and a 1-character length.

Function Keys

Each screen has a specific set of function keys associated with it. These function keys allow you to move to a different screen, save information you have typed on this screen, or perform some task with the data you have typed on the screen. At the bottom of each screen, you will find a list of the function keys that are valid on that screen. In our example in Figure 2-3, the function keys listed are F3, F6, F10, and F24.

There are some function keys that are global to the entire CODE-1 Plus System. These function keys work the same for every screen on which they are available (though not every global function key is available from every screen).

Function Key	Description
F1	Obtain online help.
F3	Exit the system.
F5	Refresh the screen (put the last-saved values back in the fields).
F6	Update the job by saving the information in the current component.
F12	Back-up one level to the previous screen, usually without saving your changes.
F17	Position the list at the top.
F18	Position the list at the bottom.
F19	Shift left to see more information.
F20	Shift right to see more information.
F24	Display additional function keys.

Saving to an External File

CODE-1 Plus provides you with the ability to save job data to an external file. Once you have saved the data, you may then load the data from the file into other jobs. This is particularly useful if you have a company standard, or a specific format for all of your company's name-and-address files.

The file you are saving to must be created before you submit the job to run. The file must be a source physical file with a record length of 92.

Online Help

Each screen in CODE-1 Plus has online help available at the touch of a function key. Any time you are unsure what you are supposed to type for a particular field, or what a specific function key does, you can press **F1** or your **Help** key. Detailed, context-sensitive information is displayed about the purpose of the screen, the fields on the screen, and the function keys you can use from the screen. The help text will be positioned to the information about the field your cursor was on when you pressed **Help** or **F1**.

2 - Getting Started

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Getting Started After Installation

This chapter provides information on the files that were installed on your system and libraries that were created during installation.

Creating a CODE-1 Plus Job

If you performed the standard CODE-1 Plus installation, the default product libraries are G1@@PGMS (containing global/job management utilities) and G1C1PGMS (CODE-1 Plus application files). The following menu displays when you sign on.

```
HH:MM:SS      Precisely Software Application Selection      G1MM01
MM/DD/YYYY      My Sample Job                               G1MM0001
                                                         RXX.XM00

Select one of the following:

1. Mailstream Plus Presorting and Reporting System
2. List Conversion System
3. Label Printing System
4. Merge/Purge System
5. CODE-1 Plus Name/Address Coding System
6. Generalized Selection System
7. EZ-CASE Plus
8. Geographic Coding Plus
9. I/O-Jet Plus
10. Business Merge/Purge Plus
11. GeoTAX
12. VeriMove

60. Canadian/International Products

Option _

F3=Exit
```

1. Type a 5 in the Option field. The CODE-1 Plus **Work with Jobs** screen (C1CPMM03) displays.

```
HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPMM00
MM/DD/YYYY      My Sample Job                               C1CPMM03
                                                         RXX.XM00

Type options, press Enter.
3=Copy          4=Delete  6=Print  7=Rename  12=Work with
16=Submit      99=Release job lock      Position to job ____

Creation  *-- -- -- --Last Activity-- -- --* Work
OPT JobID  Date      Date      User      Function      Library

F3=Exit      F5=Refresh      F6=Create      F11=Display Descriptions
F12=Cancel   F19=Reclaim space  F21=Print Summary  F24=More keys
```

- Press **F6** to create a new job. You are prompted to type the new job ID. The job ID used cannot already exist in the CODE-1 Plus system.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPMM00
MM/DD/YYYY      My Sample Job                             C1CPMM03
                                      Work with Jobs         RXX.XM00

New Job ID  TUTOR

OPT  JobID      Creation  *-- -- -- --Last Activity-- -- -- --*  Work
      Date      Date      User      Function      Library

F3=Exit      F5=Refresh      F6=Create      F11=Display Descriptions
F12=Cancel    F19=Reclaim space  F21=Print Summary  F24=More keys

```

- Type **TUTOR** in the **New Job ID** field, and press **Enter**. The *Create New Job* screen (C1CPNJ01) displays.
- Fill in the fields as shown below.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPNJ00
MM/DD/YYYY      My Sample Job                             C1CPNJ01
                                      Create New Job         RXX.XM00

Specify Library to hold job objects.

Library for job objects: DEMO

Provide job details as required:                                Exit Routine

Input N/A file . . . . . C1TUTOR
Library. . . . . DEMO or
Member . . . . . *FIRST

Job description. . . . . QDFTJOB
Library. . . . . QGFL

F3=Exit      F6=Create Job                                     More...

```

Note: In this tutorial, we use a work library called DEMO. Create this library before starting the tutorial or specify a different library name (one that already exists on your system). If you do not know a valid library to use, see your company's system administrator for help. You cannot specify a Precisely product library.

- Page down to view the fields on the next screen. CODE-1 Plus verifies that you have filled in all fields correctly. The second **Create New Job** screen (C1CPNJ02) appears. We want to accept all default values on this screen, so no action needs to be taken.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPNJ00
MM/DD/YYYY      My Sample Job                          C1CPNJ02
Job TUTOR      Create New Job                          RXX.XM00

Select Address Matching output files.

Successfully coded file. . . . . CINAMTUTOR
Library. . . . . *LIBWK *LIBWK
Member . . . . . CODED

ZIP+4 coded file . . . . . CINAMTUTOR
Library. . . . . *LIBWK *LIBWK
Member . . . . . ZIP4

Unsuccessfully coded file. . . . . CINAMTUTOR
Library. . . . . *LIBWK *LIBWK
Member . . . . . UNCODED

Invalid ZIP(s) file. . . . . CINAMTUTOR
Library. . . . . *LIBWK *LIBWK
Member . . . . . INVZIP

F3=Exit F6=Create job
Bottom

```

6. Press **F6** to create the new job. The job is created, and the **Define/Submit CODE-1 Plus Job** screen (C1CPDS02) appears. Notice that your job ID is displayed in the upper left corner, just below the date.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPDS00
MM/DD/YYYY      My Sample Job                          C1CPDS02
Job TUTOR      Define/Submit CODE-1 Plus Job            RXX.XM00

Type options, press Enter.
2=Edit 6=Create

Function
PX Defaults for Print Output
MI Reformat Input Record
ID Name/Address File Layout
OD Name/Address Record Posting
MO Reformat Output Record
RP Report Selection
G9 Geographic Coding Definition
SB Submit Batch Job

F3=Exit F12=PrevScrn

```

We have completed the task of creating the job.

7. If you don't want to define your specifications, press F3. You will again see the *Work with Jobs* screen with your new job listed alphabetically among the other jobs.

CODE-1 Plus Parameters

Now that you have created a new job, you can start defining the job details. CODE-1 Plus jobs require you to define the following basic components.

- Defaults for Print Output
- Reformat Input Record
- Name/Address File Layout
- Name/Address Record Posting

- Reformat Output Record
- Report Selection

You can access these components from the Define/Submit CODE-1 Plus Job screen (C1CPDS02). For each component you define, CODE-1 Plus stores parameter definitions to the following members.

Member	Contents
FILEDF Members	
BMPRM	FILEDF for the CODE-1 Plus program
Individual Parameter Members	
@@PXT	HEADER parameter record
IDPRM	Input file parameter records
ODPRM	Output file parameter records
RPPRM	Report parameter records
MIPRM	Reformat Input Record
MOPRM	Reformat Output Record

Job Files

CODE-1 Plus creates several job files in the Precisely work library each time you run a job. The xxxxx indicates the job name.

File Name	Description
PRMC1xxxxx	Contains all the parameter files for your input, output, and report information.
C1NAMxxxxx	Contains all the results for your CODE-1 Plus processing: coded file, uncoded file, invalid ZIP Code file, and ZIP + 4 file.
C1STAxxxxx	Contains the statistical information.

3 - System-Wide Command

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Entering Commands at the Command Line

From a command line, you can enter the following commands to run or submit a CODE-1 Plus job:

- C1RUNJOB – Runs the job interactively
- C1SBMJOB – Submits the job to run in batch mode

When you enter the C1RUNJOB or C1SBMJOB commands, you have two options.

- Type the command and then press F4 for a screen prompting you for the input name/address file, library, and member, as well as processing limitations.

– Or –

- Type the command and the Job ID of the job you want to run or submit, and then press Enter to run or submit the job with the same name/address file and other parameters that you used last time this job was submitted.

In addition to entering these commands at the system prompt, you can include them in your control language (CL) programs to run or submit several jobs in succession.

Note: For your system to recognize these commands, your library list must contain the CODE-1 Plus library (default G1C1PGMS). The libraries for other products should not be in the library list.

Using C1RUNJOB to Run CODE-1 Plus Jobs

C1RUNJOB (CODE-1 Plus Run Job) is an optional command that executes a CODE-1 Plus job:

- Interactively
- From a command line
- From within a control language program

You can use C1RUNJOB in a job stream to run jobs in a specific order. The library list must contain the CODE-1 Plus library before C1RUNJOB can be executed using command ADDLIB LIB(G1C1PGMS).

The C1RUNJOB command fields reflect the field values that are available through the job submission function screens. The value *SAME indicates that the last values on those screens will be used.

However, the values typed on this command do not replace the values on the Submit CODE-1 Plus Job screens.

Executing C1RUNJOB Interactively

To execute the C1RUNJOB command interactively:

1. Position your cursor on the command line.
2. Type C1RUNJOB, and press F4. The Run CODE-1 Plus Job (C1RUNJOB) screen displays.

Field	Parameter Selections	Character value
Job ID		Name, *SAME
Input N/A File Name	*SAME	Name, *SAME
Library	*SAME	Name, *SAME, *NONE
Member	*SAME	Name, *SAME
Input File Exit Routine	*SAME	Name, *SAME
Extended List Code Support?		Y, N
Memory Module Options		S, M, L, H
Use RDI Large Memory Module?		Y, N
CODE-1 Plus Database Library	*DEFAULT	Name, *DEFAULT
Override expired database?		Y, N
Output File Record Length		Number
Coded output N/A File Name	*SAME	Name, *SAME
Library	*SAME	Name, *SAME
Member	*SAME	Name, *SAME, *NONE
Coded file Exit Routine	*SAME	Name, *SAME
Delete existing Coded file?		N, Y

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

The initial C1RUNJOB screen displays three columns.

- The first column lists the field and parameter selections available in C1RUNJOB.
 - The second column provides entry fields for all parameter definitions.
 - The third column lists all valid values or valid value types for each field.
3. Press F11 to display the keywords for your parameter selections. The keywords provide an alternative method for typing commands and parameters.
 4. Complete the entries on this screen. When you use C1RUNJOB:
 - You must specify the Job ID to execute.
 - If you specify *SAME for any output file, library, member name, or exit routine name, CODE-1 Plus uses either the value specified in your most recent job submission or the default values.
 5. Page down to see additional C1RUNJOB selections.

```

Run CODE-1 Plus Job (C1RUNJOB)

Type choices, press Enter.

Produce ZIP+4 Coded file? . . . N, Y
ZIP+4 Coded Output N/A File . . *SAME Name, *SAME
Library . . . . . *SAME Name, *SAME
Member . . . . . *SAME Name, *SAME, *NONE
ZIP+4 Coded File Exit Routine . *SAME Name, *SAME
Dlt existing ZIP+4 Coded file? . N, Y
Produce Invalid ZIP file? . . . N, Y
Invalid ZIP Output N/A File . . *SAME Name, *SAME
Library . . . . . *SAME Name, *SAME
Member . . . . . *SAME Name, *SAME, *NONE
Invalid ZIP file Exit Routine . *SAME Name, *SAME
Dlt existing Invalid ZIP file? . N, Y
Produce Uncoded file? . . . . . N, Y
Uncoded Output N/A File Name . . *SAME Name, *SAME
Library . . . . . *SAME Name, *SAME
Member . . . . . *SAME Name, *SAME, *NONE
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

6. Use the instructions for completing the first screen to complete the second screen with valid entries for your job.
7. Page down to see additional C1RUNJOB selections.

```

Run CODE-1 Plus Job (C1RUNJOB)

Type choices, press Enter.

Uncoded file Exit Routine . . . *SAME Name, *SAME
Delete existing Uncoded file? . N, Y
Produce Statistics file? . . . N, Y
Statistics File Name . . . . . *SAME Name, *SAME
Library . . . . . *SAME Name, *SAME
Member . . . . . *SAME Name, *SAME, *NONE
Dlt existing Statistics file? . N, Y
Street,Firm,Dir/Sfx Match Code . Character value
Return Vanity City Names? . . . Y, N
Accept Multiple Matches? . . . Y, N
Dual Address Match Logic . . . N, S, P
Mixed Case . . . . . C, L
Return ZIP if not Correlated? . Y, N
Store Non-Standard PMB Nbrs? . Y, N
Max Address Correctness . . . 0-9
Max Overall Correctness . . . 0-9
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

Complete the fields on the third C1RUNJOB screen with valid entries for your job.

8. Page down to see additional C1RUNJOB selections.

```

Run CODE-1 Plus Job (C1RUNJOB)

Type choices, press Enter.

CASS Configuration Sfx . . . . . 00-99
Terminate if Non-CASS cert? . . Y, N
Enhanced HR Alt Matching? . . . Y, N
Mult Sec Component Proc? . . . Y, N
Execution log counter . . . . . Number
Enhanced Street Matching? . . . S, A
Limit match to ZIP locality? . . Y, N
Split Indica Processing? . . . Y, N
Write NCO if ZIP+4 = 0000,9999 . Y, N
Append C/O Data Flag . . . . . Y, N
Low ZIP of ZIP range . . . . . Character value
High ZIP of ZIP range . . . . . Character value
Input records to skip . . . . . Number
Fraction of input to process . . Number
Max input records to process . . Number
Nth records to process . . . . Number
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

Complete the fields on the fourth C1RUNJOB screen with valid entries for your job.

9. Page down to see additional C1RUNJOB selections.

```

Run CODE-1 Plus Job (C1RUNJOB)

Type choices, press Enter.

Included or Excluded . . . . . INC, EXC
Fraction of records . . . . . Number
EXITOP Program Name . . . . . *SAME Name, *SAME
EXITOP CODE-1 Plus ID . . . . . P
EXITOP User-Defined Data . . . . . *SAME

CASS-Certified Company Name . . *SAME
CASS-Certified Software Name . . *SAME
CASS-Certified Software:
  Version . . . . . Character value
  Release . . . . . Character value
  Modification . . . . . Character value
Z4CHANGE-Cert Company Name . . . *SAME
Z4CHANGE-Cert SW Name/Ver . . . . *SAME

EL0T-Cert Company Name . . . . . *SAME

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys
More...

```

Complete the fields on the fifth C1RUNJOB screen with valid entries for your job.

10. Page down to see additional C1RUNJOB selections.

```

Run CODE-1 Plus Job (C1RUNJOB)

Type choices, press Enter.

EL0T-Cert Software Name/Ver . . . *SAME

Use Auxiliary Reference File? . . . N, Y
Write Aux to NCO or COK? . . . . N, C

Bottom

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

Complete the fields on the sixth C1RUNJOB screen with valid entries for your job.

11. Press **Enter** to run your job using your specified parameters.

Using C1SBMJOB to Submit CODE-1 Plus Jobs

C1SBMJOB (CODE-1 Plus Submit Job) is an optional command that submits a CODE-1 Plus job to batch from the command line or from within a control language program. You can use C1SBMJOB in a jobstream to submit jobs in a specific order. The library list must contain the CODE-1 Plus library before C1SBMJOB can be executed.

The fields on the C1SBMJOB command reflect the field values that are available through the job submission function screens. The value “***SAME**” indicates that the last values on those screens will be used. The values typed on this command, however, will not replace the values on the **Submit CODE-1 Plus Job** screens.

Note: The **Submit Job** command (C1SBMJOB) is identical to the **Run Job** command (C1RUNJOB) except for the addition of the job description, job name, and hold on queue parameters.

Executing C1SBMJOB Interactively

To execute the C1SBMJOB command interactively:

1. Position your cursor on the command line.
2. Type C1SBMJOB, and press F4. The Submit CODE-1 Plus Job (C1SBMJOB) screen displays.

Field	Entry Field	Character value
Job ID		Name, *SAME
Input N/A File Name	*SAME	Name, *SAME
Library	*SAME	Name, *SAME, *NONE
Member	*SAME	Name, *SAME
Input File Exit Routine	*SAME	Name, *SAME
Extended List Code Support?		Y, N
Memory Module Options		S, M, L, H
Use RDI Large Memory Module?		Y, N
CODE-1 Plus Database Library	*DEFAULT	Name, *DEFAULT
Override expired database?		Y, N
Output File Record Length		Number
Coded output N/A File Name	*SAME	Name, *SAME
Library	*SAME	Name, *SAME
Member	*SAME	Name, *SAME, *NONE
Coded file Exit Routine	*SAME	Name, *SAME
Delete existing coded file?		N, Y

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

The initial C1SBMJOB screen displays three columns.

- The first column lists the field and parameter selections available in C1SBMJOB.
 - The second column provides entry fields for all parameter definitions.
 - The third column lists all valid values or valid value types for each field.
3. Press F11 to display the keywords for your parameter selections. The keywords provide an alternative method for typing commands and parameters.
 4. Complete the entries on this screen. When you use C1SBMJOB:
 - You must specify the Job ID to execute.
 - If you specify *SAME for any output file, library, member name, or exit routine name, CODE-1 Plus uses either the value specified in your most recent job submission or the default values.
 5. Page down to see additional C1SBMJOB selections.

```

Submit CODE-1 Plus Job (C1SBMJOB)

Type choices, press Enter.

Produce ZIP+4 Coded file? . . . N, Y
ZIP+4 Coded Output N/A File . . *SAME Name, *SAME
Library . . . . . *SAME Name, *SAME
Member . . . . . *SAME Name, *SAME, *NONE
ZIP+4 Coded File Exit Routine . *SAME Name, *SAME
Dlt existing ZIP+4 Coded file? . N, Y
Produce Invalid-ZIP file? . . . N, Y
Invalid ZIP Output N/A File . . *SAME Name, *SAME
Library . . . . . *SAME Name, *SAME
Member . . . . . *SAME Name, *SAME, *NONE
Invalid ZIP file Exit Routine . *SAME Name, *SAME
Dlt existing Invalid ZIP file? . N, Y
Produce Uncoded file? . . . . . N, Y
Uncoded Output N/A File Name . . *SAME Name, *SAME
Library . . . . . *SAME Name, *SAME
Member . . . . . *SAME Name, *SAME, *NONE
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

6. Use the instructions for completing the first screen to complete the second screen with valid entries for your job.
7. Page down to see additional C1SBMJOB selections.

```

Submit CODE-1 Plus Job (C1SBMJOB)

Type choices, press Enter.

Uncoded file Exit Routine . . . *SAME Name, *SAME
Delete existing Uncoded file? . N, Y
Produce Statistics file? . . . N, Y
Statistics File Name . . . . . *SAME Name, *SAME
Library . . . . . *SAME Name, *SAME
Member . . . . . *SAME Name, *SAME, *NONE
Dlt existing Statistics file? . N, Y
Street,Firm,Dir/Sfx Match Code . Character value
Return Vanity City Names? . . . Y, N
Accept Multiple Matches? . . . Y, N
Dual Address Match Logic . . . N, S, P
Mixed Case . . . . . C, L
Return ZIP if not Correlated? . Y, N
Store Non-Standard PMB Nbrs? . Y, N
Max Address Correctness . . . 0-9
Max Overall Correctness . . . 0-9
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

Complete the fields on the third C1SBMJOB screen with valid entries for your job.

8. Page down to see additional C1SBMJOB selections.

```

Submit CODE-1 Plus Job (C1SBMJOB)

Type choices, press Enter.

CASS Configuration Sfx . . . . . 00-99
Terminate if Non-CASS cert? . . Y, N
Enhanced HR Alt Matching? . . . Y, N
Mult Sec Component Proc? . . . Y, N
Execution log counter . . . . . Number
Enhanced Street Matching? . . . S, A
Limit match to ZIP locality? . . Y, N
Split Indica Processing? . . . Y, N
Write NCO if ZIP+4 = 0000,9999 . Y, N
Append C/O Data Flag . . . . . Y, N
Low ZIP of ZIP range . . . . . Character value
High ZIP of ZIP range . . . . . Character value
Input records to skip . . . . . Number
Fraction of input to process . . Number
Max input records to process . . Number
Nth records to process . . . . Number
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

Complete the fields on the fourth C1SBMJOB screen with valid entries for your job.

9. Page down to see additional C1SBMJOB selections.

```

Submit CODE-1 Plus Job (C1SBMJOB)

Type choices, press Enter.

Included or Excluded . . . . . INC, EXC
Fraction of records . . . . . Number
EXITOP Program Name . . . . . *SAME Name, *SAME
EXITOP CODE-1 Plus ID . . . . . P
EXITOP User-Defined Data . . . . . *SAME

CASS-Certified Company Name . . *SAME
CASS-Certified Software Name . . *SAME
CASS-Certified Software:
Version . . . . . Character value
Release . . . . . Character value
Modification . . . . . Character value
Z4CHANGE-Cert Company Name . . *SAME
Z4CHANGE-Cert SW Name/Ver . . . *SAME

EL0T-Cert Company Name . . . . . *SAME

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display More...
F24=More keys

```

Complete the fields on the fifth C1SBMJOB screen with valid entries for your job.

10. Page down to see additional C1SBMJOB selections.

```

Run CODE-1 Plus Job (C1RUNJOB)

Type choices, press Enter.

EL0T-Cert Software Name/Ver . . *SAME

Use Auxiliary Reference File? . . N, Y
Write Aux to NCO or COK? . . . . N, C

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display Bottom
F24=More keys

```

Complete the fields on the sixth C1SBMJOB screen with valid entries for your job.

11. Press **Enter** to submit your job for batch processing using your specified parameters.

Using the Job Import Utility

Use the Job Import Utility to create a ready-to-run job from a flat parameter file and parameters specified on the import command. To use the Job Import Utility, follow these steps:

1. Add the product install and global library to your library list.

Use the ADDLIBLE or EDTLIBL command.

ADDLIBLE LIB(G1C1PGMS)

ADDLIBLE LIB(G1@@PGMS).

2. Verify that the job does not already exist.

- a. Call G1MM01.
- b. Select option 5: CODE-1 Plus Name/Address Coding System.
- c. Verify that the job does not appear in the list.

3. Create a file to hold the job parameters to be imported using the create source file command:
CRTSRCPF FILE(MYLIB/PARMFILE) RCDLEN(92)

Note: The file must have a record length of 92.

You may also use an existing source file.

4. FTP the job parameters into the source file using your preferred method.

You will FTP the parameter file from the source platform (Windows or Unix, for example) into a new or existing member of the source physical file created in step 3.

Note: Some FTP clients cannot send parameters directly to a source physical file. In these cases, create an 80-byte file and FTP the parameter file into that file. Copy that file to the source physical file using the CPYF command with parameter option FMTOPT(*CVTSRC).

5. Import the job. Type IMPJBC1P and press F4. The Import CODE-1 Plus Job (IMPJBC1P) screen displays

Import CODE-1 Plus Job (IMPJBC1P)

Type choices, press Enter.

Parm Input File Name	Name
Library	Name
Member	Name, *FIRST
Job ID	Character value
Job work Library	Name
Create work Library? N	Y, N
Job Input N/A File Name	Name
Library	Name
Member	Name, *FIRST

Bottom

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

6. Complete the fields on the IMPJBC1P screen with valid entries for your job.

Parameter	Description
[Parameter] Input File Name/Library/Member	Source physical file that you created in step 3 and member you FTP'd the parameters into in step 4.

Parameter	Description
Job ID	Name of the job you want to create. A Job ID may be from one to five characters in length. The characters may be A-Z, 0-9, or special characters \$, @, #, or _. Embedded blanks are not permitted.
Job Work Library	Name of the library where the IBM i parameter file will be created (PRMC1jobid).
Create Work Library	Specify whether to create the Job Work Library if it does not already exist. If library does not exist but Create Work Library was not specified, the program will fail with CPF9810.
Job Input N/A File Name/Library/Member	In the created job, this is the default input file name on the job submission screen. Specify the input file name here (there is no parameter to define the input file name).

Note: Other variables on the Submit Batch Job screens (C1CPSBnn) are set to default values, including job description and output file names.

7. Verify the results.

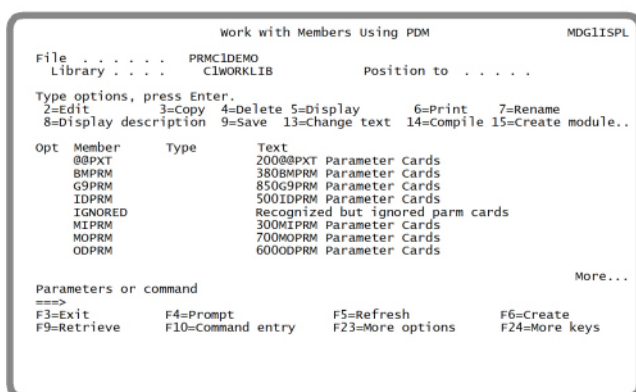
- a. Review the IBM i parm file using the WRKM BRPDM command:

```
WRKM BRPDM C1WORKLIB/PRMC1jobid
```

In this case, you would use:

```
WRKM BRPDM C1WORKLIB/PRMC1DEMO
```

- b. Use option 5 to view the members



8. Review the following members by specifying option 5=Display.

Parameter Member	Description
IGNORED	Parameters that were recognized, but not otherwise processed, such as TESTIT and CHCKPT.
ORIGINAL	Copy of the complete list of parameters being imported, as specified in step 5
PROCESSED	Parameters that were imported, but that do not appear in any parameter member, such as parameters that are specified on the "Submit Batch Job" screens. For example: FILEDF, DB LIB, BYPEXP, AUXIL1, and EXITOP, and so on. The values on those parameters will appear on the "Submit Batch Job" screens.
UNKNOWN	Parameters that were ignored because their names were unrecognized.
Other members	Contain the imported, sorted-out parameters used by the application.

Note: Parameters that are commented out with a leading "*" (asterisk) or "* " (asterisk+space) are sorted to the appropriate member, but are not otherwise processed.

9. Run the job.
 - a. Verify that the job now exists and is ready to run with no modifications.
 - b. Start the product by calling G1MM00, or G1MM01.
 - c. Select option 5: CODE-1 Plus Name/Address Coding System.
 - d. The Last Activity displayed on the Work with Jobs screen (C1CPMM03) will show as "Import Job".
 - e. On the Define/Submit CODE-1 Plus Job screen (C1CPDS02), the values listed under Last Activity indicate the date and time the job was imported, and will show user IMPJOBC1P.

Example

This example describes the steps to create a job using an existing library:

- Named DEMO
- Using the work library C1WORKLIB
- Using the product install library G1C1PGMS
- Created from parameters FTP'd into the file MYLIB/PARMFILE member PARMMBR

This example assumes the library MYLIB already exists.

1. Run the commands ADDLIB LIB(G1C1PGMS) and ADDLIB LIB(G1@@PGMS).
2. CALL G1MM01 and select option 5: CODE-1 Plus Name/Address Coding System and verify that the job DEMO does not appear in the list.
3. Run the command:

```
CRTSRCPF FILE(MYLIB/PARMFILE) RCDLEN(92) .
```

4. FTP parameters into MYLIB/PARMFILE member PARMMBR.
5. Run the IMPJOBC1P command.
6. Verify the results of the import. In this case, you would use:

```
WRKMBRPDM C1WORKLIB/PRMC1DEMO
```

Use option 5 to display the contents of the members.

7. Run the job.
 - a. CALL G1MM01 and select option 5: CODE-1 Plus Name/Address Coding System.

- b. Use option 16 next to the job "DEMO" or use the commands *C1RUNJOB* or *C1SBMJOB* to run or submit the job. For example:

```
C1RUNJOB JOBID(DEMO)
```

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      T  C1CPMM00
MM/DD/YYYY        Replace with screen heading desired        M  C1CPMM03
                  Work with Jobs                             B  RXX.XM00

Type options, press Enter.
 3=Copy      4=Delete  6=Print  7=Rename 12=Work with
16=Submit   99=Release job lock          Position to job

Opt JobID      Creation      *----- Last Activity -----* Work
16 DEMO      01/27/2016      Date      User      Function      Library
                                01/27/2016  IMPJOBC1P  Import Job      C1WORKLIB

F3=Exit      F5=Refresh      F6=Create      F11=Display Descriptions
F12=Cancel   F19=Reclaim space F21=Print Summary F24=More keys

```

.

Error Messages

IMPJOBC1P may return the following escape messages:

- IMP0100: Job already exists
- All CHKOBJ escape messages, including:
- CPF9810: Library xxxxxxxxxxxx not found
- CPF9801: Object xxxxxxxxxxxx in library xxxxxxxxxxxx not found (file not found)
- CPF9815: Member xxxxxxxxxxxx file xxxxxxxxxxxx in library xxxxxxxxxxxx not found

4 - Using the Database Function

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What Are the Database Functions?

CODE-1 Plus provides utilities that allow you to:

- Reduce the size of the CODE-1 Plus database
- Specify the location of the CODE-1 Plus database files
- Install a new CODE-1 Plus database
- Display CODE-1 Plus database information
- Change the default library name for CODE-1 Plus database files.

These options are available through the database functions menu — a utility that can be accessed through the **Work with Jobs** screen. CODE-1 Plus provides the following screens for working with the database functions:

- **Create Reduced Database Files**
- **Print CODE-1 Plus Database State Size Report**
- **Install CODE-1 Plus Database**
- **Database Functions** (for changing the default library).

Accessing the Database Functions Menu

To access the **Database Functions** Menu, you need to be positioned at the **Work with Jobs** Menu. For more details on accessing the Work with Jobs Menu, refer to the **IBM i Job Management Guide**.

1. Press **F20** from the **Work with Jobs** screen.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System  T  C1CPMM00
MM/DD/YYYY      My Sample Job                        M  C1CPMM03
[Job]           Work with Jobs                        B  RXX.XM00

Type options, Press Enter.
  3=Copy      4=Delete  6=Print  7=Rename  12=Work with
  16=Submit   99=Release job lock                Position to job

Creation  *-- -- -- -- --Last Activity-- -- -- --*  Work
OPT  JobID  Date      Date      User      Function  Library
--  -
- BRK01  05/01/1999  05/01/1999  D1DEF    Upd: Print Dflts  UPTTEST
- JOB01  05/01/2000  05/01/2000  D1DEF    Upd: Print Dflts  UPTTEST
- JOB02  05/01/2001  05/01/2001  D1DEF    Upd: Print Dflts  UPTTEST
- JOB03  05/01/2002  05/01/2002  D1DEF    Upd: Print Dflts  UPTTEST
- JOB04  05/01/2003  05/01/2003  D1DEF    Upd: Print Dflts  UPTTEST
- JOB05  05/01/2004  05/01/2004  D1DEF    Upd: Print Dflts  UPTTEST
- JOB06  05/01/2005  05/01/2005  D1DEF    Upd: Print Dflts  UPTTEST
- JOB07  05/01/2006  05/01/2006  D1DEF    Upd: Print Dflts  UPTTEST
- JOB08  05/01/2007  05/01/2007  D1DEF    Upd: Print Dflts  UPTTEST
- JOB09  09/01/2008  09/01/2008  D1DEF    Upd: Print Dflts  UPTTEST
- JOB10  10/01/2008  10/01/2008  D1DEF    Upd: Print Dflts  UPTTEST
- JOB11  11/01/2008  11/01/2008  D1DEF    Upd: Print Dflts  UPTTEST
-

F3=Exit      F5=Refresh      F6=Create      F11=Display Descriptions
F12=Cancel   F19=Reclaim space  F21=Print Summary  F24=More keys

```

Note: “F20=Database Functions” **does not** need to be displayed at the bottom of the **Work with Jobs** screen to access this function.

2. The **Database Functions** screen (C1CPDB01) displays.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System  C1CPDB00
MM/DD/YYYY      My Sample Job                        C1CPDB01
                Database Functions                    RXX.XM00

Select one of the following:

  1. Reduce DB by State
  2. Install DB
  3. Print DB Detail Reports
  4. Print DB State Size Report
  5. Display DB Information
  6. Change Default DB
  7. Convert EWS File
  8. Load License File
  9. Print License Report
  10. Create and process the DPV Seed File

  P. Display encrypted administration password

Option  ____

F3=Exit

```

Creating a Reduced CODE-1 Plus Database

You can use the **Create Reduced Database** screen (C1CPDR01) to create a reduced database that includes only selected states. Reduced databases are useful when working with limited storage space.

Accessing the Create Reduced Database Screen

To access the **Create Reduced Database** screen:

1. Type **1** in the **Option** field of the **Database Functions** screen and press **Enter**.
2. The **Create Reduced Database** screen displays.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPDR00
MM/DD/YYYY          My Sample Job                            C1CPDR01
                  Create Reduced Database                     RXX.XM00
                  MonthName YYYY Database created by CODE-1 Plus NN.N

Type options, press Enter.          Original Database Library: C1DBFILES
1-Select State                      Reduced Database Library:

Opt   3D Range  Abbr  State
-----
006-009 PR      Puerto Rico
008-008 VI      Virgin Islands
010-027 MA      Massachusetts
028-029 RI      Rhode Island
030-038 NH      New Hampshire
039-049 ME      Maine
050-059 VT      Vermont
060-069 CT      Connecticut
070-089 NJ      New Jersey
100-149 NY      New York
150-196 PA      Pennsylvania
197-199 DE      Delaware

More...

F3=Exit  F6=Create  F10=Selected only

```

States on the **Create Reduced Database** screen display in order of ascending 3-digit ZIP Code ranges (the first 3 digits of the state's inclusive 5-digit ZIP Codes). Every state has a unique range of 3-digit ZIP Codes.

For example, in the screen shown above, all ZIP Codes in Rhode Island either begin 028xx or 029xx. You can use the **Opt** field to the left of each 3-digit range to include that range in the reduced database.

Note: To estimate the size of your reduced database, use the Print CODE-1 Plus Database State Size Report option on the Database Functions screen.

This screen has two views: the **Display All** view and the **Selected Only** view. The **Selected Only** view displays only the 3-digit ranges you have selected (i.e., states with a "1" in the **Opt** field). All other 3-digit ranges are eliminated from the display. Press F10 to toggle between the two views.

Note: All states and 3-digit ranges available cannot be displayed on a single screen. You can access 3-digit ranges that are not shown on the screen by paging up and down the list.

Specifying the Library for the Reduced Database

CODE-1 Plus does not delete files when reducing a database. Instead, CODE-1 Plus recreates the CODE-1 Plus database files you select and stores the files another library. For this reason, it is necessary to specify the library in which the database is to be recreated.

To specify the library:

1. Position your cursor at the **Reduced Database Library** field.
2. Type the name of the library that will hold the reduced database.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPDR00
MM/DD/YYYY          My Sample Job                            C1CPDR01
                   Create Reduced Database                    RXX.XM00
                   MonthName YYYY Database created by CODE-1 Plus NN.N

Type options, press Enter.      Original Database Library: _____
1=Select State                  Reduced Database Library: _____

  Opt   3D Range  Abbr  State
    --   --
    006-009  PR    Puerto Rico
    008-008  VI    Virgin Islands
    010-027  MA    Massachusetts
    028-029  RI    Rhode Island
    030-038  NH    New Hampshire
    039-049  ME    Maine
    050-059  VT    Vermont
    060-069  CT    Connecticut
    070-089  NJ    New Jersey
    100-149  NY    New York
    150-196  PA    Pennsylvania
    197-199  DE    Delaware

F3=Exit  F6=Create  F10=Selected only
More...

```

The library specified to contain the reduced database must be a valid library and cannot already contain a CODE-1 Plus database. Attempting to create a reduced CODE-1 Plus database in a library that already contains one results in an error message.

Selecting States to be Included in the Reduced Database

Option fields are provided at the left of each 3-digit range on the **Create Reduced Database** screen. There are only two options for these fields — a “1” in one of these fields indicates that the associated state is to be included in the reduced database. If you leave the field blank, the state is not included. To select the states you want:

1. Type **1** in the **Opt** field to the left of each state you want to include in the database.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPDR00
MM/DD/YYYY          My Sample Job                            C1CPDR01
                   Create Reduced Database                    RXX.XM00
                   MonthName YYYY Database created by CODE-1 Plus

Type options, press Enter.      Original Database Library: _____
1=Select State                  Reduced Database Library: DEMO

  Opt   3D Range  Abbr  State
  --   --
  1 006-009  PR    Puerto Rico
  1 008-008  VI    Virgin Islands
  1 010-027  MA    Massachusetts
  1 028-029  RI    Rhode Island
  1 030-038  NH    New Hampshire
  1 039-049  ME    Maine
  1 050-059  VT    Vermont
  1 060-069  CT    Connecticut
  1 070-089  NJ    New Jersey
  1 090-098  AE    APO AE
  1 100-149  NY    New York
  1 150-196  PA    Pennsylvania

F3=Exit  F6=Create  F10=Selected only
More...

```

Note: To select states and 3-digit ranges not shown on the screen, page down to view additional choices.

Viewing Your Selections and Storage Space Requirements

After indicating all states to include in the database, you may display information for only those states and 3-digit ranges you selected.

- 1. To display the states and 3-digit ranges you have selected, press **F10**.

HH:MM:SS
MM/DD/YYYY

CODE-1 Plus Name/Address Coding System
My Sample Job
Create Reduced Database
MonthName YYYY Database created by CODE-1 Plus

C1CPDR00
C1CPDR01
RXX.XM00

Type options, press Enter.
1=Select State

Opt

3D Range

Abbr

State

—

006-009

PR

Puerto Rico

—

008-008

VI

Virgin Islands

1

010-027

MA

Massachusetts

—

028-029

RI

Rhode Island

—

030-038

NH

New Hampshire

—

039-049

ME

Maine

—

050-059

VT

Vermont

—

060-069

CT

Connecticut

1

070-089

NJ

New Jersey

—

090-098

AE

APO AE

1

100-149

NY

New York

—

150-196

PA

Pennsylvania

More...

F3=Exit F6=Create F10=Selected only

- 2. CODE-1 Plus displays only the 3-digit ranges that have a "1" in the associated **Opt** field. The example below shows the selected states from the previous page (Massachusetts, New Jersey, and New York).

HH:MM:SS
MM/DD/YYYY

CODE-1 Plus Name/Address Coding System
My Sample Job
Create Reduced Database
MonthName YYYY Database created by CODE-1 Plus

C1CPDR00
C1CPDR01
RXX.XM00

Type options, press Enter.
1=Select State

Opt

3D Range

Abbr

State

1

010-027

MA

Massachusetts

1

070-089

NJ

New Jersey

1

100-149

NY

New York

Bottom

F3=Exit F6=Create F10=Selected only

Note: If no **Reduced Database Library** is indicated or if the library specified could not be found, an error message displays.

Changing Your Selections

You can change your selections at any time before you create the reduced database. Ranges can be added or subtracted by using the **Create Reduced Database** screen displaying all 3-digit ranges.

1. To return to a full display of 3-digit ranges from the “selected only” display, press **F10** (Display All) from the “selected only” display.

```

CODE-1 Plus Name/Address Coding System      C1CPDR00
My Sample Job                               C1CPDR01
Create Reduced Database
MonthName YYYY Database created by CODE-1 Plus

Type options, press Enter.      Original Database Library:
1=Select State                  Reduced Database Library: DEMO

Opt   3D Range  Abbr  State
1     010-027   MA    Massachusetts
1     070-089   NJ    New Jersey
1     100-149   NY    New York

Bottom

F3=Exit  F6=Create  F10=Display All

```

2. You return to the previous display.

```

CODE-1 Plus Name/Address Coding System      C1CPDR00
My Sample Job                               C1CPDR01
Create Reduced Database
MonthName YYYY Database created by CODE-1 Plus

Type options, press Enter.      Original Database Library:
1=Select State                  Reduced Database Library: DEMO

Opt   3D Range  Abbr  State
-     006-009   PR    Puerto Rico
-     008-008   VI    Virgin Islands
1     010-027   MA    Massachusetts
-     028-029   RI    Rhode Island
-     030-038   NH    New Hampshire
-     039-049   ME    Maine
-     050-059   VT    Vermont
-     060-069   CT    Connecticut
1     070-089   NJ    New Jersey
-     090-098   AE    APO AE
1     100-149   NY    New York
-     150-196   PA    Pennsylvania

More...

F3=Exit  F6=Create  F10=Selected only

```

3. To add or subtract a range from this display, type or delete a 1 in the **Opt** field of each range you want to add or subtract.
4. Press **F10** again to display the new set of selected ranges.

You can continue to add or subtract ranges in this way until you are satisfied with your selections.

Creating the Reduced Database

When you have selected all 3-digit ranges that you want, you are ready to create the reduced database. To create the reduced database:

1. Press **F6**.

```

CODE-1 Plus Name/Address Coding System      C1CPDR00
My Sample Job                             C1CPDR01
Create Reduced Database
MonthName YYYY Database created by CODE-1 Plus

Type options, press Enter.      Original Database Library:
1=Select State                  Reduced Database Library: DEMO

Opt  3D Range  Abbr  State
--  --
1    006-009   PR   Puerto Rico
1    008-008   VI   Virgin Islands
1    010-027   MA   Massachusetts
1    028-029   RI   Rhode Island
1    030-038   NH   New Hampshire
1    039-049   ME   Maine
1    050-059   VT   Vermont
1    060-069   CT   Connecticut
1    070-089   NJ   New Jersey
1    090-098   AE   APO AE
1    100-149   NY   New York
1    150-196   PA   Pennsylvania      More...

F3=Exit  F6=Create  F10=Selected only

```

2. CODE-1 Plus recreates the records from the original database.

Installing a CODE-1 Plus Database

The database functions provide a utility to install CODE-1 Plus databases. This option allows you to install updated or new CODE-1 Plus databases or move existing CODE-1 Plus databases from media to a new library. To install the CODE-1 Plus database, you must have one of the following:

- Database file that you downloaded from the website
- Media purchased from the Precisely eStore

To install a CODE-1 Plus database, follow these steps:

1. Press **F20** from the **Work with Jobs** screen. The **Database Functions** screen displays.
2. Type **2** in the **Option** field of the **Database Functions** screen and press **Enter**.
3. The **Install CODE-1 Plus Databases** screen (C1INDB01) displays.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1INDB01
MM/DD/YYYY      My Sample Job                             C1INDB01
                  Install CODE-1 Plus Databases           RXX.XM00

Specify database installation parameters:
Install US Postal Database? _ Reduce US Postal Database? _
Include ELOT? _ Include Enhanced Street? _
Install DPV Flat DB? _ Install DPV Full(Hash) DB? _ Install DPV Split DB? _
Install LACSLink DB? _ Install SuiteLink DB? _ Install PreciselyID DB? _
Install RDI Database? _
Install to Library . . . .

```

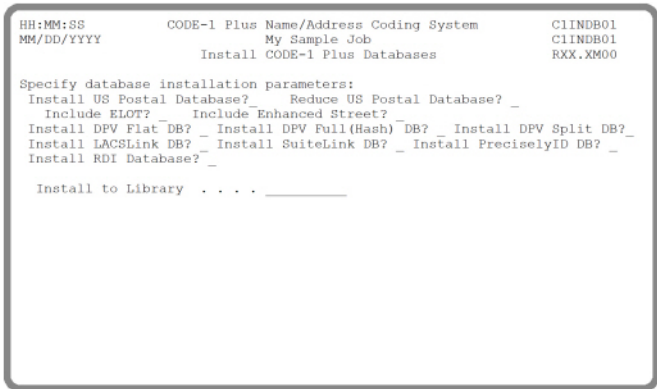
4. Complete the appropriate fields.

Field	Description
Install US Postal Database?	<p>Indicate if you wish to install the US Postal Database.</p> <ul style="list-style-type: none"> • Include ELOT—indicate if you wish to include ELOT in your database install. • Include Enhanced Street—indicate if you wish to include Enhanced Street in your database install.
Reduce US Postal Database?	Indicate whether to reduce your US Postal Database.
Install DPV Database?	<p>Indicate the DPV Database you want to install:</p> <ul style="list-style-type: none"> • Install DPV Flat DB • Install DPV Full (Hash) DB • Install DPV Split DB
Install LACSLink Database?	Indicate whether to install the LACSLink Database.
Install SuiteLink Database?	Indicate whether to install the SuiteLink Database.
Install PreciselyID Database?	Indicate whether to install the PreciselyID Database.
Install RDI Database?	Indicate whether to install the Residential Delivery Indicator (RDI) Database
Install to Library?	Specify the name of the library to which you want the database installed. Upon initial display, the current default database library displays. To load the database to a new library, simply type over the existing library name.

Installing a Database from Internet Download

To install a CODE-1 Plus database from internet download, follow these steps:

- 1. Press **F20** from the **Work with Jobs** screen. The **Database Functions** screen displays.
- 2. Type **2** in the **Option** field of the **Database Functions** screen and press **Enter**.
- 3. The **Install CODE-1 Plus Databases** screen displays.



- 4. To install from an Internet download, specify "I" for Install Source. Complete the appropriate fields.

Field	Description
Install US Postal Database?	Indicate if you wish to install the US Postal Database. <ul style="list-style-type: none">• Include ELOT—indicate if you wish to include ELOT in your database install.• Include Enhanced Street—indicate if you wish to include Enhanced Street in your database install.
Reduce US Postal Database?	Indicate whether to reduce your US Postal Database.
Install DPV Database?	Indicate the DPV Database you want to install: <ul style="list-style-type: none">• Install DPV Flat DB• Install DPV Full (Hash) DB• Install DPV Split DB

Field	Description
Install LACSLink Database?	Indicate whether to install the LACSLink Database.
Install SuiteLink Database?	Indicate whether to install the SuiteLink Database.
Install to Library?	Specify the name of the library to which you want the database installed. Upon initial display, the current default database library displays. To load the database to a new library, simply type over the existing library name.

If you have previously downloaded a US Postal Database or a DPV database, those existing databases are lost once you start the IDS install process.

Printing the CODE-1 Plus Database Detail Report

You can use the CODE-1 Plus Database Detail Report to print addresses from the database. You can select up to 100 ZIP Code ranges and then print the addresses from the database that resides within those ranges. You can also generate reports for each ZIP Code within a range.

Follow these steps to print the CODE-1 Plus Database Detail Report.

1. In the CODE-1 Plus job screen, press **F20** to access the Database Functions menu.
2. Select option 5, "Print CODE-1 Plus Database Detail Reports."
3. The Database Print ZIP-range selection screen (C1CPDP01) appears.


```
HH:NMM:SS          CODE-1 Plus Name/Address Coding System      C1CPDP00
MM/DD/YYYY         My Sample Job                               C1CPDP01
                   Database Print ZIP-range selection           RX.X.MMOO

[CONTRL] City Report . . . . Y Y, N   Address Columns . . 2    1, 2
Related ZIP Report . . . Y, N        Alias Street . . . Y Y, N
Address Report . . . . Y Y, N       Page Eject . . . Y Y, N

[HEADER] Date . . . Title . .
[PAGESZ] Lines per page . . 60
[UHDxx]  1 A
          2 A
          3 A
          4 A
[UFTxx]  1 A
          2 A
          3 A
          4 A

[SELZIP]
From-----To From-----To From-----To From-----To
- - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
F3=Exit F6=Print
```

4. Complete the appropriate fields.

Field	Description
City Report	<p>Indicate whether to generate a City Report for each ZIP Code that falls within a range defined by the SELZIP parameter record.</p> <ul style="list-style-type: none"> • N — Do not generate City Reports. • Y —Generate City Reports. • Blank — Default is Y.
Related ZIP Code Report	<p>Indicate whether to print the Related ZIP Code Report for each ZIP Code that falls within a range defined by the SELZIP parameter record.</p> <ul style="list-style-type: none"> • N — Do not generate Related ZIP Code Reports. • Y — Generate Related ZIP Code Reports. • Blank — Default is Y.
Address Report	<p>Indicate whether to generate an Address Report for each ZIP Code that falls within a range defined by the SELZIP parameter record. Enter one of the following codes:</p> <ul style="list-style-type: none"> • N — Do not generate Address Reports. • Y — Generate Address Reports. • Blank — Default is Y.

Field	Description
Address Columns	<p>Indicate whether to generate an Address Report in a 1- or 2-column format for each ZIP Code that falls within a range defined by the SELZIP parameter record.</p> <ul style="list-style-type: none"> • 1 — Generate Address Reports in a 1-column format. • 2 — Generate Address Reports in a 2-column format. • Blank — Default is 2.
Alias Street	<p>Indicate whether to generate an Alias Report for each ZIP Code that falls within a range defined by the SELZIP parameter record. Enter one of the following codes:</p> <ul style="list-style-type: none"> • N — Do not generate Alias Reports. • Y — Generate Alias Reports. • Blank — Default is Y.
Page Eject	<p>Indicate whether the City and Related ZIP Code Reports should begin on a new page.</p> <ul style="list-style-type: none"> • N — Print the City Report and Related ZIP Code Report without starting a new page after each report. • Y — Start printing on a new page, after printing the City Report or the Related ZIP Code Report. • Blank — Default is Y.
Date	<p>Specify the date to print at the top line of the first page of each report. Default is to print the system date.</p>
Title	<p>Specify the title to print on the top line of every page of each report. No default.</p>
Lines-Per-Page	<p>Specify the number of lines to print on each page of the Execution Log or the other reports.</p> <ul style="list-style-type: none"> • Minimum is 25. • Maximum is 225. • Blank — Default is 60.

Field	Description
Line (1, 2, 3, 4)	<p>Specify a code to indicate the side of the header line on which this text should appear:</p> <ul style="list-style-type: none"> • A — Left side of the line • B — Right side of the line. • Blank — No default. <p>Specify the text to appear at the top of each page of every report. No default.</p>
Line (1, 2, 3, 4)	<p>Specify a code to indicate the side of the footer line on which this text should appear:</p> <ul style="list-style-type: none"> • A — Left side of the line • B — Right side of the line • Blank — No default. <p>Specify the text to appear at the bottom of every page of each report. No default.</p>
From	Specify the lowest 5-digit ZIP Code for each ZIP Code range. You must enter at least one ZIP Code range. No default.
To	Specify the highest 5-digit ZIP Code for each ZIP Code range. You must enter at least one ZIP Code range. No default.

5. To print the Database Detail Report, press **F6**.
6. To exit without printing the report and return to the **Database Functions** screen, press **F3**.

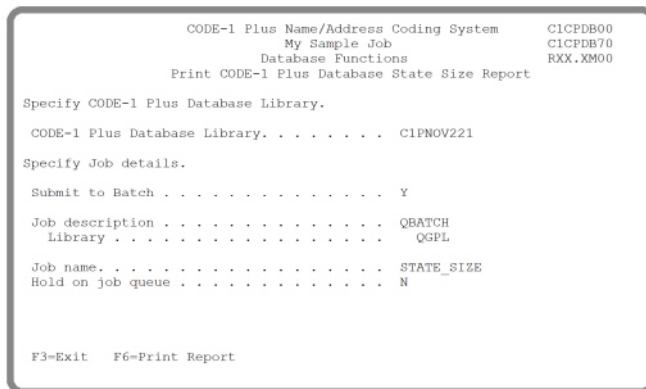
For more information on C1PDBPRT, the callable routine that generates the CODE-1 Plus Database Print Report, refer to "CODE-1 Plus Callable Subroutines" in your **CODE-1 Plus Reference Guide**.

Printing the CODE-1 Plus Database State Size Reports

You can use the CODE-1 Plus State Size Report to determine the total size in bytes of the CODE-1 Plus database and the approximate sizes for each state's data. The total size of the database is not equal to the sum of the state sizes, because there is global data that is common to all states. You can also produce this report for a database that is created by the CODE-1 Plus database reduction process.

To display this information about your database:

1. Type **6** in the **Option** field of the **Database Functions** screen and press **Enter**.
2. The Print CODE-1 Plus Database State Size Report screen (C1CPDB70) displays.



```
CODE-1 Plus Name/Address Coding System      C1CPDB00
My Sample Job                               C1CPDB70
Database Functions                           RXJ.XM00
Print CODE-1 Plus Database State Size Report

Specify CODE-1 Plus Database Library.

CODE-1 Plus Database Library. . . . . C1PNOV221

Specify Job details.

Submit to Batch . . . . . Y
Job description . . . . . QBATCH
Library . . . . . QGPL
Job name. . . . . STATE_SIZE
Hold on job queue . . . . . N

F3=Exit  F6=Print Report
```

3. To print the State Size report, press **F6**.
4. To exit the screen without printing the report and return to the **Database Functions** screen, press **F3**.

For more information on C1DBSTSZ, the callable routine that generates the CODE-1 Plus State Size Report, refer to "CODE-1 Plus Callable Subroutines" in your **CODE-1 Plus Reference Guide**.

Displaying Database Information

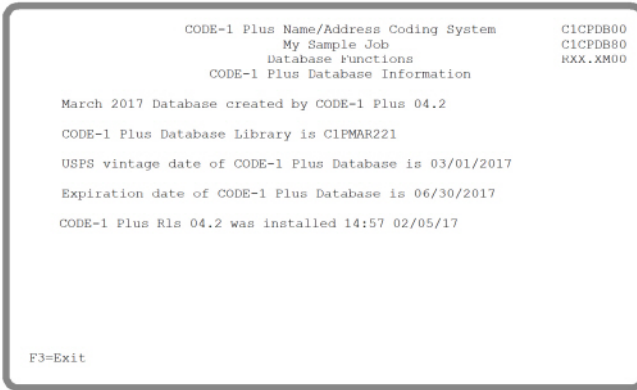
You can display the following information for the database that you are using:

- Date on which the database was created

- Library in which the database resides
- USPS vintage date of the database
- Expiration date of the database
- Date on which CODE-1 Plus was installed

To display this information about your database:

1. Type **7** in the **Option** field of the **Database Functions** screen and press **Enter**.
2. The **Database Information** screen (C1CPDB80) appears.



```

CODE-1 Plus Name/Address Coding System      C1CPDB00
My Sample Job                             C1CPDB80
Database Functions                         RXX.XM00
CODE-1 Plus Database Information

March 2017 Database created by CODE-1 Plus 04.2

CODE-1 Plus Database Library is C1PMAR221

USPS vintage date of CODE-1 Plus Database is 03/01/2017

Expiration date of CODE-1 Plus Database is 06/30/2017

CODE-1 Plus Rls 04.2 was installed 14:57 02/05/17

F3=Exit

```

3. To exit the screen and return to the Database Functions screen, press **F3**.

Changing the Default CODE-1 Plus Database Library

If you have several CODE-1 Plus databases, this option can be used to direct CODE-1 Plus to the database you would like to use as the default. The default database is the one CODE-1 Plus will use for all address matching, database display, and any other CODE-1 Plus database functions. Since each database must exist in a separate library, to specify the database CODE-1 Plus should use, all that you have to do is specify the unique library in which it resides.

To change the default CODE-1 Plus database library:

1. Type **8** in the **Option** field of the **Database Functions** screen and press **Enter**.
2. The **Database Functions Change Default Library** screen (C1CPDB90) appears.

```

CODE-1 Plus Name/Address Coding System      C1CPDB00
      My Sample Job                        C1CPDB01
      Database Functions                    RXX.XM00

Specify default CODE-1 Plus Database Library.

Default CODE-1 Plus Database Library. . . . G1C1FILES

F3-Exit

```

3. Type the name of the desired CODE-1 Plus database library.
4. To save the library name and exit the screen, press **Enter**. The **Database Functions** screen appears.
5. To exit without changing the default database library, press **F3**.

Converting EWS File into CODE-1 Plus Format

If you downloaded an Early Warning System File from the USPS website, you will need to convert that data into a CODE-1 Plus format. To convert your EWS file into CODE-1 Plus format:

1. Type **9** in the **Option** field of the **Database Functions** screen and press **Enter**.
2. The EWS File Conversion screen (C1CPDB20) displays

```

CODE-1 Plus Name/Address Coding System      C1CPDB00
      My Sample Job                        C1CPDB01
      Database Functions                    RXX.XM00

[AUXIL] Enter parameters for EWS file conversion:
Input EWS file . . . . .
Library . . . . .
Member . . . . . *FIRST
Format . . . . . A, E
A-Street, Suffix, Directs in single addr line, E-Address elements separately
Output work file . . . . .
Library . . . . .
Member . . . . .
Address Element Locations:                      Pos Len
5-digit ZIP. . . . .
Street Name/Address Line . . . . .
Street Suffix. . . . .
Pre-directional. . . . .
Post-directional. . . . .
House Range. . . . .
Secondary Range. . . . .
Secondary Designator . . . . .

F3=Exit F6=Execute

```

3. Complete the **Input EWS file** field with the name of the file you created. The output file is automatically placed in your database library.

Note: The Output work file and Address Element Locations are not changeable at this time.

4. Press F6 to run the conversion.
5. When you return to the main menu, your file has been successfully converted. You can now use this Auxiliary File as input to your CODE-1 Plus job by using the AUXIL1 parameter.

Returning to the Work With Jobs Screen

When you finish using the database functions, you may exit and return to the **Work with Jobs** screen. To exit the database functions and return to the **Work With Jobs** Menu:

1. Display the **Database Functions** screen (C1CPDB01).
2. Press **F3**. The **Work with Jobs** screen displays.

5 - Defining Input

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Defining Your Input File

This chapter provides information for using the IBM i screens to define information in your input file to be used during processing of your CODE-1 Plus job.

Note: You must create your CODE-1 Plus job before using the screens described in this chapter to define your input file. For information on creating a CODE-1 Plus job, refer to [Creating a CODE-1 Plus Job](#).

Function Keys

The following function keys are available on the Name/Address File Layout screens.

Function Key	Name	Description
F3	Exit	Exit from the Name/Address File Layout component, without saving the data.
F4	Edit Function	Move your cursor next to the comparison value you want to edit. Press F4. The Confirmation Compare Values screen (C1PCF20) appears filled in with the selected comparison value information.
F6	Update	Save the data and quit from the Name/Address File Layout component.
F10	Compare Values	Goes to the first Confirmation Compare Values screen (C1PCF11).
Insert	Insert new MOVE I operation.	

Function Key	Name	Description
F11	Delete at cursor	Move your cursor next to the comparison value you want to delete. Press F11. The Confirmation Compare Values screen (C1CPCF20) appears filled in with the selected comparison value information. Indicate whether to delete the selected value.
F17	Top	Moves to the first CONFRM parameter record in your confirmation compare value list.
F18	Bottom	Moves to the last CONFRM parameter record in your confirmation compare value list.
F24	Field Search	Allows you to display the location and lengths of the fields in an external file. Type file name and library of external file.

Using the Name and Address Layout Screens

The Name and Address Layout screens allow you to define address information in your input file including:

- Location, length, and format of address information in your input file
- Conditions for selecting records for processing
- Additional processing options

Determining Your Address Format

The options above indicate how the address elements are stored in your input file. Option M indicates that all street address parts are located in a single field:

....+....1....+....2....+....3....+....4....+....5

123 Main Street, Apt. 24A

Option F indicates that the street address parts are located in two or more separate fixed fields:

....+....1....+....2....+....3....+....4....+....5

123 Main St W

And option L indicates that the street address is stored in two or more fields that correlate to the address “lines” as they would appear on a label:

....+....1....+....2....+....3....+....4....+....5

123 Main Street Apt.24A

For a more detailed description of these three options, please read the following sections.

Single Field Address Formats

The single field address format is the simplest and, perhaps, most common. In this scenario, all street address parts — including the house number, leading directional, street name, street suffix, trailing directional, apartment designator, and apartment number — are stored as a continuous string in a single fixed field. For example, in the figure below an input file layout has the street address stored in a single fixed location.

.....1.....2.....3.....4.....5.....6.....7
4200 PARLIAMENT PL STE 600 LANHAM MD 20706-1844
564 N HOLLY STREET NW APT 43 HYATTSVILLE MD 20782

Entire Street Address

Example for Single Field Address Formats

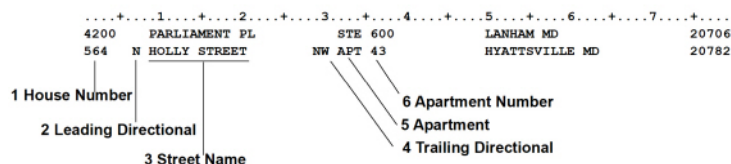
Positions 1-49 of this example contain all the street address parts. Additionally, the city, state, and ZIP Code are located in a separate single fixed field, positions 50-79.

Multiple Field Address Formats

With the multiple field format, the street address parts — including the house number, leading directional, street name, street suffix, trailing directional, apartment designator, and apartment number — are stored in two or more separate fixed fields.

When you choose this option CODE-1 Plus strings together the separate fields in the order that you define them, deleting all extraneous spaces to form a continuous single street address line.

For example, the figure below illustrates an input file layout that has the street address parts stored in six separate fields.



Multiple Field Address Formats

- Positions 1-6 of this example contain the house number
- Positions 7-8 contain the leading directional
- Positions 9-28 contain the street name and street suffix
- Positions 29-31 contain the trailing directional
- Positions 32-41 contain the apartment designator
- Positions 41-48 contain the apartment number.

The city and state are located in positions 50-69, and the ZIP Code is located in another separate field, positions 75-79.

Multiple Line Address Formats

The multiple line format also has address parts stored in two or more fields on the input file. Multiple line fields correspond to the “lines” of a standard address label. For example, in the figure below the address label displays four lines of information.

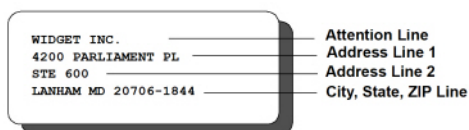
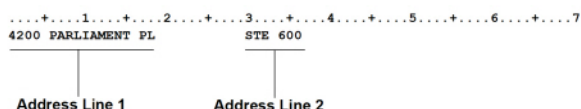


Figure 1: Multiple Address Lines on a Label

This example is a typical label format where address line 1 contains street information and address line 2 contains apartment information. The next figure illustrates the input file layout that corresponds to the label lines shown above.



Address Lines Corresponding to Label Example

Positions 1-29 of the input file contain the first address line of a label, and positions 30-49 contain the second address line.

Defining Input Address and ZIP Code Information

The Name/Address File Layout screens define the position and length of address and ZIP Code information in your input file.

Defining Address and ZIP Code Locations

Use the **Address and ZIP Code Locations** screen (C1CPID10) to define the location of address elements in your input file.

To access the **Address and ZIP Code Locations** screen:

1. From the Work With Jobs screen, use **F12** to select the job for defining input. The Define/Submit CODE-1 Plus Job screen displays.
2. Select Name/Address File Layout.
3. Use the following table to complete the fields on the **Address and ZIP Code Locations** screen.

Field	Description
Location of Street Address in Input File	

Field	Description
Location Method	<p>Required. Type one of the following codes to describe where the street address information is located in the input record.</p> <ul style="list-style-type: none"> • F — Street address information is located in multiple fields. 2,3,4,5, or 6 fields. • L — Street address information is located in multiple address lines. 2,3,4,5, or 6 lines (with or without city and state). • M — Street address information is located in a single field. All street address elements are stored as a continuous string in a single fixed field. • blank — No default.
Position	<p>Required. Enter a number from 1-9999 to specify the location in the input record where the street address information is found. As many as 6 address position fields may be defined. No default.</p> <ul style="list-style-type: none"> • blank — No default.
Len	<p>Required. Enter a number from 1-99 to specify the length(s) in the input record of the indicated address line(s).</p> <ul style="list-style-type: none"> • blank — No default.
Location of City/State/ZIP Code in Input File	

Field	Description
Location Method	<p>Required. Location of the City, state, and ZIP Code information is located in the input record.</p> <ul style="list-style-type: none"> • A — City, state, and ZIP Code found in the address lines defined above. (The street address location method must be L.) • C — City and state found in the address lines defined above, and place the ZIP Code in a separately specified position. (The street address location method must be L.) • M — City and state are found in a single field, with the specified position and length. Place the ZIP Code in a separately specified position. • S — City, state, and ZIP Code are found in separately specified positions, with separately defined lengths. • X — City, state, and ZIP Code are found in a single field, with the position and length defined in the city or city/ST fields. • blank — No default. <p>Note: Options A and C are only valid here in conjunction with multiple line records. (L must be specified for the street address location method.)</p>
Location of ZIP Code in Input File	
Pos	<p>Required if C, M, or S is specified as the ZIP Code location method. Enter a number from 1-9999 to specify the starting location in the input record of the ZIP Code, when the ZIP Code is to be located separately from the rest of the address. No default.</p>

Field	Description
Fmt	<p>Required if C, M, or S is specified as the ZIP Code location method. Specify the format of the input ZIP Code:</p> <ul style="list-style-type: none"> • B — 3-byte binary format. • C — 5-byte EBCDIC character format. • P — 3-byte packed decimal format. • 9 — ZIP Code and ZIP + 4 Codes in a 4-byte binary format. • blank — No default.
Location of City or City/State in Input File	
Pos	<p>Required if your input records are in a format other than L (multiple lines). Enter a number from 1-9999 to specify the starting location in the input record of one of the following:</p> <ul style="list-style-type: none"> • City (location method S). • City and state (location method M). • City, state, and ZIP Code (location method X).
Len	<p>Required if your input records are in a format other than L (multiple lines). Enter a number from 1-99 to specify the length of city, state, and/or ZIP Code field in the input record.</p>
Location of Separate State in Input File	
Pos	<p>Required if your input records are in a format other than L (multiple lines). Enter a number from 1-9999 to specify the starting location in the input record of the separate state:</p>

Field	Description
Len	Required if your input records are in a format other than L (multiple lines). Enter a number from 1-99 to specify the length of the state in the input record.

Defining Additional Input File Information

Use the Additional Input File Information screen (C1CPID20) to define the location of additional information in your input file.

To access the Additional Input File Information screen:

1. From the Name/Address File Layout, page down to the Additional Input File Information screen.
2. Use the following table to complete the fields on the Additional Input File Information screen.

Field	Description
Specify input file Firm Name location	
Position	Optional. Enter a number from 1-9999 to specify the starting position of the firm name in the input file. No default.
Length	Optional. Enter a number from 1-99 to specify the length(s) of the firm name in your input record. No default.
Firm name within input address lines?	Required if location not specified in first field. <ul style="list-style-type: none"> • Y — Indicates the firm name is located within specified input address lines. • N — Indicates the firm name is NOT located within specified input address lines. • blank — Default is N. <p>NOTE: If N is selected, the Location Method L is required</p>

Field

Description

Specify storage of output standardized Firm Name

Position

Optional. Enter a number from 1-9999 to specify the starting position of the standardized firm name in the input file. No default.

Length

Optional. Enter a number from 1-99 to specify the length(s) of the standardized firm name in your input record. No default.

Disposition for non-stored firm name

Optional. Code indicating what to store in cases where the standardized firm name was not stored, because no match was found.

- B — Store blanks.
- I — Store the extracted input.
- X — Store nothing.
- **blank** — Default is **X**.

Specify storage of original ZIP Code

Location to store extracted ZIP Code

Optional. Enter a number from 1-9999 to specify the starting position in the output record for storing the extracted input ZIP Code. No default.

Specify existing ZIP+4 and Carrier Route locations

Original ZIP + 4 Code, if desired

Optional. Enter a number from 1-9999 to specify the starting position in the input record of the original ZIP + 4 Code (if present). No default.

Field	Description
Fmt	Optional. Code indicating the format of the original ZIP + 4 Code: <ul style="list-style-type: none"> • B — 2-byte binary format. • C — 4-byte EBCDIC character format. • P — 3-byte packed decimal format. • Blank — No default.
Original Carrier Route Code, if desired	Optional. Enter a number from 1-9999 to specify the starting location in the input record of the original carrier route code. No default.

Activating Z4CHANGE Processing

Use the Activate Z4CHANGE Option screen (C1CPID30) to specify the input record location of the CODE-1 Plus Master File vintage date or type the vintage date on the screen. For Z4CHANGE processing, the vintage date is the date the input file was last processed with the CODE-1 Plus database. For more information on the Z4CHANGE option, refer to [Using Z4CHANGE](#).

The Z4CHANGE option uses the vintage date to determine if a 9-digit ZIP Code has changed since the last time your records were processed. The Z4CHANGE Master File contains all of the changes to ZIP + 4 Codes in the last 12 months. Records that contain an unchanged 9-digit ZIP Code, according to vintage date, do not need to be re-coded and are skipped.

To access the Activate Z4CHANGE Option screen:

1. From the Name/Address File Layout, page down to the Activate Z4CHANGE Option screen.
2. Use the following table to complete the fields on the Activate Z4CHANGE Option screen.

Field	Description
Location of CODE-1 Plus Vintage Date in N/A record	

Field	Description
Position	Required if the literal vintage date is not specified. If the Master File vintage date appears on your input records, enter a number from 1-9999 to specify the starting position of the CODE-1 Plus vintage date on the input record.
Vintage	Required, if the position and format of the vintage date is not specified. The literal CODE-1 Plus vintage date in YYYYMM format. The first two digits must contain '19' or '20'. The last two digits must be between '01' and '12'.
Format of Vintage Date	Required if the literal date is not specified. Code indicating the format of the vintage date: <ul style="list-style-type: none"> • B — 2-byte binary (YYMM). • C — 4-byte character (YYMM). • P — 3-byte packed-decimal (YYMM). • 3 — 3-byte binary (YYYYMM). • 4 — 4-byte packed-decimal (YYYYMM). • 6 — 6-byte character (YYYYMM). • blank — No default.

Defining Urbanization Information

Use the Input **Urbanization Definition** screen (C1CPID40) to define urbanization information in the input file including:

- Location and length of the urbanization name
- Whether the urbanization name is within multiple address lines
- Output location for the urbanization name
- Whether to activate Suite^{Link} and how to process if Suite^{Link} reports an error

An urbanization name is used mainly in Puerto Rican addressing to further describe the location of a street address. Urbanization names are essential in Puerto Rican addressing because there may be multiple streets within a town that have the same street name. The urbanization name designates a more specific area to locate the address. Specific areas can include a housing development or an apartment building. Some areas in Puerto Rico do not have street names, so the urbanization name is considered the street name.

To access the Input **Urbanization Definition** screen:

1. From the Name/Address File Layout, page down to the Input **Urbanization Definition** screen.
2. Use the following table to complete the fields on the Input **Urbanization Definition** screen.

Field	Description
Specify urbanization Name options	
Urbanization name is within multiple address lines?	<p>An option indicating whether the input record urbanization name is located randomly in the address lines or in its own field.</p> <ul style="list-style-type: none"> • Y — Urbanization name is located randomly within the address (only if address location method is L). • N — Urbanization name is located in its own field. • blank — Default is N.
Urbanization name location and length in N/A record	
Position	Optional. Enter a number from 1-9999 to specify the starting position of the urbanization name in the input record. No default.
Length	Optional. Enter a number from 1-99 to specify the length of the urbanization name in the input record. No default.
Location to store extracted Urbanization name	

Field	Description
Position	Optional. Enter a number from 1-9999 to specify the storage location on the output record for the urbanization name field as extracted from the input record by CODE-1 Plus. No default.
Length	Enter a number from 1-99 to specify the length of the output urbanization name field as extracted from the input record by CODE-1 Plus.
Left justify primary/secondary address lines, urbanization name?	Optional. Code indicating whether to left justify the following: <ul style="list-style-type: none"> • Contents of the primary and secondary address lines. • Firm name (if assigned). • Urbanization name (if assigned). Enter one of the following codes: <ul style="list-style-type: none"> • L — Left justify the fields listed above. • Blank — Do not left justify the fields listed above.

Defining SuiteLink Processing

Use the **Suite^{Link} Processing** screen (C1CPID45) to define Suite^{Link} processing options.

To access the **Suite^{Link} Processing** screen:

1. From the Name/Address File Layout, page down to the **Suite^{Link} Processing** screen.
2. Use the following table to complete the fields on the **Suite^{Link} Processing** screen.

Field	Description
Specify Suite^{Link} Process	

Field	Description
Suite ^{Link} Error Shutdown Indicator	<p>Optional. Code indicating how to proceed if Suite^{Link} reports an error:</p> <ul style="list-style-type: none"> • I — Ignore error and continue to attempt Suite^{Link} processing. CODE-1 Plus does not generate a USPS Form 3553 (USPS CASS Summary Report) if you specify the value “I”. • S — Shutdown when Suite^{Link} reports an error (default). Specify the value “S” if you want to generate a USPS Form 3553 (USPS CASS Summary Report). • W — Issue warning message and turn off Suite^{Link} processing. CODE-1 Plus does not generate a USPS Form 3553 (USPS CASS Summary Report) if you specify the value “W”. • blank — Default is S.
Location of Suite ^{Link} Return Code	<p>Optional. Location for Suite^{Link} return code. One of the following codes is stored:</p> <ul style="list-style-type: none"> • A — Business name matched. • 00 — Business name not matched. • Blank — No default.
Location of Suite ^{Link} Match Code	<p>Optional. Location for Suite^{Link} match code. One of the following codes is stored:</p> <ul style="list-style-type: none"> • A — Matched. • B — Not matched. • C — Business name was all noise. • D — Highrise default record not found. • E — Database is expired. • Blank — No default.

Field	Description
Location of Suite ^{Link} Fidelity Code	<p>Optional. Location for Suite^{Link} match fidelity. One of the following codes is stored:</p> <ul style="list-style-type: none"> • 1 — Exact match. • 2 — Acceptable match (one word not matched). • 3 — Unacceptable match (more than one word not matched). • Blank — No default. <p>Note: You should ignore the Fidelity Code if the Match Code is not 'A'. The Fidelity Code is '0' if the Match Code is B (no match), C (business name consisted entirely of "noise" words), or D (9-digit zip not recognized as a high rise default).</p>
Memory Model	<p>Optional. This option allows you to specify size of Suite^{Link} memory module.</p> <ul style="list-style-type: none"> • P — Pico memory model (no files in memory). • U — Micro memory model (no files in memory, only indexes). • S — Small memory model (slkhdr, slknormal, slknoise in memory). • M — Medium memory model (slknine file also in memory). • L — Large memory model (lcd file also in memory). • H — Huge memory model (slk file also in memory). • Blank — Default is M.
Exclude Secondary from Output Address Line	<p>Optional. Specify a code to indicate whether to call Suite^{Link} without appending the secondary information to the output address line. All other fields, ZIP + 4 value, DPC code, are determined using the secondary information returned by Suite^{Link}.</p> <ul style="list-style-type: none"> • I — Include secondary information from Suite^{Link} on the output address line. • E — Exclude secondary information from Suite^{Link} from the output address line. • Blank — Defaults to I.

Field	Description
Exclude any Invalid/Extraneous Secondary Information from Output Address Line	<p>Optional. Specify a code to include or exclude any invalid (extraneous) input secondary information.</p> <ul style="list-style-type: none"> • I — Include the invalid input secondary information. • E — Exclude the invalid input secondary information. • Blank — Defaults to I.

Defining Confirmation Options and LACSLink Processing

Use the **Confirmation Options/LACS^{Link} Processing screen** (C1CPID50) to:

- Specify that records containing either special ZIP Codes (APO/FPO, military base, and/or government agency ZIP Codes) or “confirmation marks” should be confirmed as valid ZIP Codes without undergoing the matching process. You can define up to 250 different confirmation marks to search for in the input record.
- Define LACS^{Link} processing options.

Confirming Special ZIP Codes

Often CODE-1 Plus is unable to successfully match APO/FPO ZIP Codes, military base ZIP Codes, and government agency ZIP Codes. This screen allows you to have these “special” records automatically confirmed, without CODE-1 Plus attempting to match them to the USPS database (and taking the chance of having the records rejected). For each of the record types that you specify here, CODE-1 Plus “confirms” the records as correct, bypasses the normal matching process, and stores the records in the output file.

Confirming Records with Confirmation Marks

Confirmation marks are values in your input record that, if equal to the value(s) specified on this screen (or if not equal depending on your specifications), indicate to attempt no match against the USPS database. Instead, the record is automatically written to the output file. Using confirmation marks in your records allows you to automatically confirm records you know are correct, even though CODE-1 Plus does not match them.

Example

For example, an insurance agency wants to mail solicitations to new homeowners. This agency has a standard mailing list and has also bought lists of addresses from several builders that have just finished new housing developments. Because the streets in these new developments are so new, the addresses have not yet been put on the USPS database.

The insurance agency merges these new lists with their standard mailing list, but first inserts confirmation marks in the records on the builders' lists. The records are confirmed, even though the addresses are not yet on the CODE-1 Plus database.

To define confirmation marks, on the **Confirmation Options** screen:

1. Specify whether to define equal to (EQ) or not equal to (NE) confirmation values.

For EQ confirmation values, if the value in the input record equals the confirmation value, the input record is confirmed automatically. For NE confirmation values, if the value in the input record does not equal the confirmation value, the input record is confirmed automatically.

2. Specify the location for the confirmation return code on the output record.
3. Press **F10** to add your EQ/NE confirmation values.

The **Confirmation Compare Values** screen (C1CPCF11) appears.

4. To add confirmation values, press **F10**.

The **Confirmation Compare Values** screen (C1CPCF20) appears.

5. Enter the confirmation value to search for in the input record, the location on the input record of the value, and the length of the value.
6. To save the information, press **F6**.

The **Confirmation Compare Values** screen (C1CPCF11) appears with your new confirmation value. It appears as a CONFRM parameter record.

To add another value, press **F10**. To edit the current value, press **F4**. To delete the current value, press **F11**.

Note: You may specify up to 250 confirmation values to which the confirmation mark in the input records are compared. If a string of blank spaces is one of the confirmation values, it must be the first value.

7. Once you define all the comparison values, at the **Confirmation Compare Values** screen (C1CPCF11), press **F6**.

To access the **Confirmation Options/LACS^{Link} Processing** screen (C1CPID50):

1. From the Name/Address File Layout, page down to the **Confirmation Options/LACS^{Link} Processing** screen.
2. Use the following table to complete the fields on the **Confirmation Options/LACS^{Link} Processing** screen.

Field	Description
Specify confirmation by class of ZIP Code	
Confirm APO/FPO ZIP Codes	<p>Optional. Code indicating whether to confirm APO/FPO ZIP Codes automatically. For each record “confirmed,” no address matching is done. Confirmed records are automatically written to the output file.</p> <ul style="list-style-type: none"> • Y — Confirm APO/FPO ZIP Codes. • N — Process APO/FPO ZIP Codes as normal records. • Blank — Default is N.
Confirm Military Installation ZIP Codes	<p>Optional. Specify a code to indicate whether or not to confirm military base ZIP Codes automatically. For each record “confirmed,” no address matching is done. Confirmed records are automatically written to the output file.</p> <ul style="list-style-type: none"> • Y — Confirm military base ZIP Codes. • N — Process military base ZIP Codes as normal records. • Blank — Default is N.

Field	Description
Confirm Government Agency ZIP Codes	<p>Optional. Specify a code to indicate whether or not to confirm government agency ZIP Codes automatically. For each record “confirmed,” no address matching is done. Confirmed records are automatically written to the output file.</p> <ul style="list-style-type: none"> • Y — Confirm government agency ZIP Codes. • N — Process government agency ZIP Codes as normal records. • Blank — Default is N.
Specify input file confirmation mark comparison type	
Comparison Type	<p>Optional. Code indicating whether the confirmation flag in the records should be equal to or not equal to the confirmation value(s) on this screen. Type one of the following codes:</p> <ul style="list-style-type: none"> • EQ — The confirmation flag in the record must be equal to any of the confirmation values on this screen for the record to be confirmed automatically. • NE — The confirmation flag in the record must not be equal to one of the confirmation values on this screen for the record to be confirmed automatically. • Blank — No default.
Specify location for output confirmation code	

Field	Description
Location for output confirmation code	<p>Optional. Location in the output where CODE-1 Plus will store the code indicating whether or not the record was confirmed without processing, and if so, why. One of the following codes will be stored:</p> <ul style="list-style-type: none"> • Blank — Not confirmed (record was address-matched). • A — Confirmed as an APO/FPO ZIP Code. • G — Confirmed as a government agency. • M — Confirmed as a military installation ZIP Code. • V — Confirmed by comparison to an input confirmation flag value. • Blank — No default.
Specify LACSLinkprocessing	
LACS ^{Link} Processing Type	<p>Required. Type of LACS^{Link} processing to be performed:</p> <ul style="list-style-type: none"> • Z — Perform the ZIP + 4 processing prior to LACS^{Link}. • Blank — Default is blank.
LACS ^{Link} Seed Record treatment	<p>Required. This option allows LACS^{Link} to stop batch jobs when a false-positive (seed record) has been encountered.</p> <ul style="list-style-type: none"> • S — Shut down CODE-1 Plus processing when a false-positive (seed record) is encountered. • W — Allow CODE-1 Plus to continue processing to completion of the entire job, generating USPS Form 3553. • Blank — Default is W.
LACS ^{Link} Alternate Option	<p>Specify if you want to perform alternate LACS^{Link} processing.</p> <ul style="list-style-type: none"> • R — Perform LACS^{Link} processing. • L — Invoke limited LACS^{Link} subsystem processing. Provides the CODE-1 Plus non-LACS converted street address, city, and state data to the output standardized address and parsed elements fields.

Field	Description
LACSLink Suppress 99 Return Code	<p>Specify whether to produce a “99” return code for LACS seed record processing.</p> <p>Y Do not produce “99” return code for LACS seed record processing.</p> <p>N LACS seed record processing results in “99” return code.</p> <p>Note: An “S” in “LACSLink Seed Record treatment” overrides this option.</p>
Memory Model	<p>Required. Specify the memory size of the LACSLink module.</p> <ul style="list-style-type: none"> • P — Pico memory model (no files in memory). • U — Micro memory model (no files in memory, only indexes). • S — Small memory model (Rv9 expansion in memory). • M — Medium memory model. • L — Large memory model. • H — Huge memory model (all files in memory). • Blank — Default is M.

Confirmation Compare Values Screen (C1CPCF11)

The first **Confirmation Compare Values** screen (C1CPCF11) is the sixth screen of the Name and Address File Layout component. This screen allows you to view the CONFRM parameter records CODE-1 Plus generated based on your confirmation values. If you have defined values, this screen lists the generated CONFRM parameter records. From this screen you can add, edit, and delete a value. You can also define up to 250 different confirmation marks for CODE-1 Plus to search for in the input record.

Note: For instructions on defining confirmation compare values, refer to the previous section [Defining Confirmation Options and LACSLink Processing](#).

If you have not defined any values yet, the second **Confirmation Compare Values** screen (C1CPCF20) displays.

Field	Description
Specify compare value, location, and length	
Compare Value	Enter 0-9, A-Z, or any other characters for the confirmation value. Up to 250 different values to which the confirmation flag in the input record is compared. NOTE: You can use a blank field as the comparison value only if specified in the top-most field. A blank field in any of the other positions indicates the end of the list of values.
Position	Optional. Enter a number from 1-9999 to specify the location of the input confirmation mark in your name-and-address file. No default.
Length	Optional. Enter a number from 1-99 to specify the length(s) of the input confirmation mark in your name-and-address file. No default.

Defining List Processor/Mailer Information Screen (C1CPID60)

Use the **List Processor/Mailer Information** screen (C1CPID60) to define the list code and client code information in your input file. You can also enter the date you received your file. On this screen you can tell CODE-1 Plus to print the name or ID of your current name-and-address input file in box B4 of the USPS Form 3553 or to print the number of name-and-address lists you used to produce your current mailing in box B5. You can also tell CODE-1 Plus to print the mailer's name and address on the USPS Form 3553 in box D2, specify a client code, and specify the date when you received your input file.

List Code

The term list code comes from the practice of merging several mailing lists together, using a code embedded in the records to identify the source list of each record. You can use this screen to designate any field of 9 bytes or less as your input list code. CODE-1 Plus has three reports that list information about your job, sorted by these list codes. The most common use of this option is to identify which original list the records came from. You can then use the list code reports to analyze the quality of the addresses on each of your original mailing lists.

To access the **List Processor/Mailer Information** screen (C1CPID60):

1. From the Name/Address File Layout, page down to the **List Processor/Mailer Information** screen.
2. Use the following table to complete the fields on the **List Processor/Mailer Information** screen.

Field Name	Description
List Code location and length in N/A record	
Position	Optional. Enter a number from 1-999 to specify the location of list code in your name-and-address file. No default.
Length	Optional. Enter a number from 1-9 to specify the length of list code in your name-and-address file. No default.
Client Code	Optional. Enter a number from 1-9 to specify the 1-9 character Client Code. No default.
Date Received	Optional. Enter the date you received your file in YYYYMMDD format. No default.
System Date	Optional. Enter the system date when you ran the job in MMDDCCYY format. No default.

Field Name	Description
List Processor Name	Optional. Enter up to 20 alpha-numeric characters to specify the 20-byte name used to identify the organization that coded the name and address list(s) and/or performed the ZIP + 4 barcoding using CASS-certified software. No default.
List ID	Optional. Enter up to 20 alpha-numeric characters to specify the name or ID of the current name-and-address list.No default.
Number of Lists	Optional. Enter a number from 1-5 to specify a 5-digit number indicating the number of lists used to produce the mailing. Blank is the same as one. No default.
Mailer Name and Address	Optional. Enter up to 30 alpha-numeric characters to specify the 30-byte name and address of the individual whose signature appears in box D1 of USPS Form 3553. If you leave this field blank, the corresponding line in box D2 on USPS Form 3553 remains blank. No default.

Defining Input File Sequence Check Information

Use the **Input File Sequence Check Information** screen (C1CPID70) to specify up to nine fields on the input record to check the sequence of your input file. CODE-1 Plus indicates sequence errors on the Execution Log. If a record is bypassed, it does not affect the Control Totals report.

Note: The total length of all the sequence field lengths cannot exceed 255 bytes.

To access the **Input File Sequence Check Information** screen:

1. From the Name/Address File Layout, page down to the **Input File Sequence Check Information** screen.
2. Use the following table to complete the fields on the **Input File Sequence Check Information** screen.

Field	Description
Sequence error treatment	<p>Optional. Code indicating the action CODE-1 Plus should take when a sequence error is encountered in the input file. Enter one of the following codes:</p> <ul style="list-style-type: none"> • B — (Bypass) Bypass the offending record and continue sequence checking. • C — (Continue) Continue processing the offending record and continue sequence checking. • E — End of file) Bypass the offending record, and then gracefully end the process as if the input file had reached an end-of-file. • I — (Ignore) Continue processing the offending record, but abandon any further sequence checking. • blank — Default is B. <p>NOTE: If there is a sequence error, it is indicated in the Execution Log. If a record is bypassed, it does not affect the Control Totals report.</p>
Sequence field 1 through Sequence field 9	
Position	<p>Optional. Enter a number from 1-9999 to specify the location of the field segment containing the data to be checked for an input file sequence error. No default.</p>
Length	<p>Optional. Enter a number from 1-99 to specify the length of the field segment. The total number of field segments cannot exceed 255 bytes. If the field segment is packed ("P" in previous field), the field length cannot exceed 9. No default.</p>
Packed	<p>Code indicating whether or not field segment is in a packed format that should be unpacked before checking the sequence:</p> <ul style="list-style-type: none"> • P — Field segment is packed. • Blank — Field segment is not packed.

Defining Delivery Point Validation Processing

Use the **Delivery Point Validation** screen (C1CPID80) to define and activate Delivery Point Validation (DPV) and to process options on multiple matches to the ZIP + 4 database. You can use this screen to specify the types of multiple matches for DPV confirmation. For more information on Delivery Point Validation, refer to [Using Delivery Point Validation](#).

To access the **Delivery Point Validation** screen:

1. From the Name/Address File Layout, page down to the **Delivery Point Validation** screen.
2. Use the following table to complete the fields on the **Delivery Point Validation** screen.

Field	Description
Specify DPV confirmation of multiple matches	
DPV File Option	<p>Optional. This option allows you to specify the DPV file to match against.</p> <ul style="list-style-type: none">• S — Process the DPV split file.• F — Process the DPV flat file.• H — Process the DPV full (hash) file.• Blank — Default is S.

Field	Description
DPV Memory Module Size Indicator	<p>Required. This option allows you to specify size of DPV module.</p> <ul style="list-style-type: none"> • Blank — DPV process will be using Medium memory model (default). • P — Pico memory model (no files in memory). • U — Micro memory model (no files in memory, only indexes). • S — Small memory model (HSC and HSF in memory). • M — Medium memory model (LCD also in memory). • L — Large memory model (HSX also in memory). • H — Huge memory model (all files in memory). • Blank — DPV process uses Medium memory model.
ZIP Code and PO Box or Rural Route/Highway Contract Address Type	<p>Optional. If your input file contains multiple matches of the ZIP Code and the PO Box or Rural Route/Highway Contract:</p> <ul style="list-style-type: none"> • Y — Yes, attempt to DPV confirm. • N —No, do not attempt to DPV confirm. • Blank — Default is Y.
ZIP Code and Street Address Type	<p>Optional. If your input file contains multiple matches of the ZIP Code and the street address type:</p> <ul style="list-style-type: none"> • Y — Yes, attempt to DPV confirm. • N —No, do not attempt to DPV confirm. • Blank — Default is Y.
Carrier Route	<p>Optional. If your input file contains multiple matches of the Carrier Route in CODE-1 Plus:</p> <ul style="list-style-type: none"> • Y — Yes, attempt to DPV confirm. • N —No, do not attempt to DPV confirm. • Blank — Default is Y.

Field	Description
Directional	<p>Optional. If your input file contains multiple matches of the directional:</p> <ul style="list-style-type: none"> • Y — Yes, attempt to DPV confirm. • N —No, do not attempt to DPV confirm. • Blank — Default is Y.
Suffix	<p>Optional. If your input file contains multiple matches of the suffix:</p> <ul style="list-style-type: none"> • Y — Yes, attempt to DPV confirm. • N —No, do not attempt to DPV confirm. • Blank — Default is Y.
Suffix/Directional Correction	<p>Optional. If your input file contains multiple matches of the suffix/directional correction:</p> <ul style="list-style-type: none"> • Y — Yes, attempt to DPV confirm. • N —No, do not attempt to DPV confirm. • Blank — Default is Y.
Multiple Input Secondary Components with no Designator	<p>Optional. If your input file contains multiple matches of the secondary components with no designator:</p> <ul style="list-style-type: none"> • Y — Yes, attempt to DPV confirm. • N —No, do not attempt to DPV confirm. • Blank — Default is Y. <p>Below is an example of secondary components with no designator:</p> <p>John Jones12 Main St. #12 #5New York, NY 10012</p> <p>#12 and #5 have no indication of being an apartment, PO Box or otherwise.</p>

Field	Description
Unique ZIP Code/Small Town Default ZIP + 4 Assignment Option	<p>Optional. If an address has been assigned a ZIP + 4 by CODE-1 Plus during regular processing, you may select one of the following options regarding this ZIP + 4 assignment:</p> <ul style="list-style-type: none"> • Y — Yes, attempt to DPV confirm. • N —No, do not attempt to DPV confirm. • Blank — Default is Y.

Defining Additional Delivery Point Validation Processing

CODE-1 Plus includes a second **Delivery Point Validation** screen (C1CPID85) that allows you to activate and define additional Delivery Point Validation (DPV) options. For more information on Delivery Point Validation, refer to [Using Delivery Point Validation](#).

To access the second **Delivery Point Validation** screen:

1. From the Name/Address File Layout, page down to the **Delivery Point Validation** screen.
2. Use the following table to complete the fields on the **Delivery Point Validation** screen.

Field	Description
Specify DPV confirmation of multiple matches	

Field	Description
Perform DPV Validation of Secondary Address data?	<p>Optional. Just as you can confirm that a primary address is a deliverable address using DPV, you can confirm the same for secondary address information. If you have secondary address information in your input file, select one of the following:</p> <ul style="list-style-type: none"> • Y — Yes, perform DPV validation on secondary address information. • N — No, do not perform DPV validation on secondary address information. • Blank — Default is Y.
Perform CMRA Table lookups?	<p>Optional. This option allows you to determine whether or not an input address is a Commercial Mail Receiving Agency (CMRA). Select one of the following:</p> <ul style="list-style-type: none"> • Y — Perform CMRA lookup. • N —No, do not perform CMRA lookup. • Blank — Default is Y.
Perform PBSA Lookup?	<p>Optional. This option allows you to determine whether or not an input address is a P. O. Box street address (PBSA). Select one of the following:</p> <ul style="list-style-type: none"> • Y — Yes, perform PBSA lookup. • N —No, do not perform PBSA lookup. • Blank — Default is N.
Convert Secondary Information to PMB?	<p>Optional. This option allows you to determine whether or not to convert input address secondary information to PMB. Select one of the following:</p> <ul style="list-style-type: none"> • Y — Yes, convert input address secondary information to PMB where appropriate. • N — No, do not convert input address secondary information to PMB. • Blank — Default is N.

Field	Description
RDI Processing Option	<p>Optional. If you have the RDI processing option, select from one of the following codes to indicate whether to perform RDI processing:</p> <ul style="list-style-type: none"> • D — Do DPV processing only; no RDI processing. • R — Do RDI processing only; no DPV processing. • B — Do both DPV and RDI processing. • Blank — Default is D.

Reformatting Your Input Records

This feature allows you to rearrange the components of your input records before the record is processed. The information you identify is copied, but not removed, from its original location in the input record. This feature is useful for saving data that might otherwise be overwritten by data returned from CODE-1 Plus. A maximum of 100 MOVE I operations can be defined for a job. The move operations are processed one at a time, in sequence from top.

Reformat Input Record Screen

Use the **Reformat Input Record** screen (C1CPMI13) to reformat the components of your input records before the records are processed.

To access the **Reformat Input Record** screen:

1. From the Work With Jobs screen, use **F12** to select the job for defining input. The Define/Submit CODE-1 Plus Job screen displays.
2. Select Reformat Input Record.
3. Use the following table to complete the fields on the Reformat Input Record screen.

Field Name	Description
Source Field	<p>Required. Enter 3-4 alphanumeric characters to specify the location in the work area of the information to be copied. Optionally, you can enter one of the following codes to copy one of the following types of generic information to the target location:</p> <ul style="list-style-type: none"> • SPC — Spaces. • X00 — Binary zeros. • ZRO — Character zeros. • Blank — No default.
Length	<p>Required. Enter a number from 1-999 to specify the length of the information to be copied to the target location. No default.</p>
Target Field	<p>Required. Enter a number from 1-9999 to specify the location in the input array to which you want the source information copied. No default.</p>

6 - Defining Output

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Defining Your Output File

This chapter provides information for using the IBM i screens to define information you want to store in your output file. This chapter includes a detailed description of each field on these screens.

Output Storage

Use the Output Storage screens to define locations and lengths of the information you want to store in your output file. The **Name/Address Record Posting** component provides field definitions for all result values including:

- ZIP Code
- ZIP + 4
- Carrier route codes
- Vintage date codes
- City and state names and abbreviations
- Standardized address information
- Parsed address information
- General return codes
- Delivery Point Validation information

Note: CODE-1 Plus requires you to specify at least one output storage field in each of your jobs. If you do not, CODE-1 Plus processing will fail.

Storage Options

In addition to defining the layout of your output file, the **Name/Address Record Posting** function allows you to specify the storage conditions for your processed data. CODE-1 Plus determines a relative probability of correctness for every record. CODE-1 Plus uses this probability of correctness to reject records that may contain inaccurate information. During processing, CODE-1 Plus sometimes drops information from a given address in order to determine a match or more than one match for a given ZIP Code or address component.

You can use the Storage Options screens of the Name/Address Record Posting component to specify:

- The maximum probability of correctness required for CODE-1 Plus to store a record
- Whether CODE-1 Plus stores a record if information was dropped during processing
- Whether CODE-1 Plus stores a record if there were multiple ZIP Code matches
- What to store if, due to one of the above conditions, CODE-1 Plus did not store information

Disposition Indicator

The Storage Options screens contain disposition indicator fields that determine what to store in your output file when you do not want to store the returned information. Some examples include:

- What to store when CODE-1 Plus finds multiple matches
- What to store when probable correctness codes are too high
- What to store when CODE-1 Plus drops information during a match attempt

When you decide not to store the returned information, you may decide to store:

- Blanks
- Nothing
- Zeros
- Information from your input file

In all cases, the default is for CODE-1 Plus to store blanks in the position you specify in your output file. For example, you may have decided that you did not want CODE-1 Plus to store the standardized address if there was information dropped during the matching process. In that case, CODE-1 Plus looks at the disposition indicator code you specify on the Standardized Address Storage Options screen to determine whether to store blanks or nothing in the standardized address location in your output file.

Maximum Address Correctness

During the matching process, CODE-1 Plus assigns a “probable correctness” value to a matched address. The correctness value indicates how “accurate,” on a scale of 0 to 9, CODE-1 Plus considers the match. A probable correctness value of 0 means that the standard address has the highest probability of being correct. A probable correctness value of 9 means that the record has what CODE-1 Plus considers to be the lowest probability of being correct.

Note: Records with a probable address correctness code of 9 are still likely to be correct.

For each address component, CODE-1 Plus gives you the option to specify the maximum acceptable address correctness. If you put a value in this field, CODE-1 Plus stores the output information for a specific record only when the record's probable address correctness value is equal to or less than your specified maximum. In all cases, the default maximum address correctness is 9.

For example, if you type a maximum address correctness value of 5 on the ZIP Code Locations Storage Options screen, CODE-1 Plus stores returned ZIP Codes for records with probable address correctness values of 5 and lower, but does not store returned ZIP Codes for records with probable address correctness values of 6 and higher.

Maximum Overall Correctness

CODE-1 Plus also assigns an overall probability of correctness value to matched records. The overall correctness takes into account not just the address, but also the firm-name match, and whether or not any information was dropped during the matching process. As with address correctness, the overall correctness value indicates how "accurate," on a scale of 0-9, CODE-1 Plus considers the match.

Each output Storage Options screen allows you to specify a maximum acceptable overall correctness value. If you specify a value in this field, CODE-1 Plus stores the output information for a specific record only when the record's probable overall correctness value is equal to or less than your specified maximum value. In all cases, the default maximum overall correctness is 9.

For example, if you type a maximum overall correctness value of 4 on the Standardized Address Storage Options screen, CODE-1 Plus stores standardized addresses for records with probable overall correctness values of 4 and lower but does not store standardized addresses for records with probable correctness values of 5 and higher.

Function Keys

The following function keys are available on the **Name/Address Record Posting** screens.

Function Key	Name	Description
F3	Exit	Exit from the Name/Address Record Posting component without saving data.
F6	Update	Save the data and quit from the Name/Address Record Posting component.

Function Key	Name	Description
F24	Field Search	Allows you to display the location and lengths of the fields in an external file. Type file name and library of external file.

Defining ZIP Code Location

Use the ZIP Code Storage screen to define the location and format of the ZIP Code information to store in your output file. To access the ZIP Code Storage Screen:

1. From the Work With Jobs screen (C1CPMM03), use F12 to select the job for defining output.
2. The Define/Submit CODE-1 Plus Job screen (C1CPDS02) displays. Select Name/Address Record Posting.
3. The ZIP Code Storage screen (C1CPOD010) displays.
4. Use the following table to complete the fields on the **ZIP Code Storage** screen.

Field	Description
-------	-------------

Specify ZIP Code Storage

Field	Description
Location for the ZIP Code return code	<p>Optional. Enter a number from 1-9999 to specify the location in the output record to store the 1-byte ZIP Code return code listed below.</p> <ul style="list-style-type: none"> • A — Apartment number missing or not found in database, and an apartment-level match was required. • B — Insufficient (or blank) address match information. • C — The address probable correctness or overall probable correctness was too high. • D — Information was dropped. • E — External match—auxiliary file processing. • H — House/box number not found on street. • L — The standardized address was too long. • M — Multiple matches of equal quality were found. • N — The ZIP Code wasn't stored because the processing requirements specified that it was not to be stored. • S — Street name not found in ZIP Code. • Z — ZIP Code not found in database. • Blank — The match attempt was successful. <p>No default.</p>
Location for the ZIP Code	<p>Optional. Enter a number from 1-9999 to specify the location in the output record for the standardized ZIP Code. No default.</p>
Format	<p>Required if location on the output record for the ZIP Code is not zero. Format of the standardized ZIP Code:</p> <ul style="list-style-type: none"> • C — Store the ZIP Code as a 5-byte character field. • P — Store the ZIP Code as a 3-byte packed field. • Blank — No default.

Field	Description
Location for the source of final ZIP Code return code	<p>Optional. Enter a number from 1-9999 to specify the location in the output record for the 1-digit code reflecting the source of the final ZIP Code.</p> <ul style="list-style-type: none"> • B — ZIP Code was not determined. • F — Final ZIP Code determined from the finance number. • L — New address obtained from LACS processing. • M — Final ZIP Code determined from the ZIPMOVE database. • Z — Original ZIP Code was retained.
Location for PO Box-only ZIP Code flag	<p>Optional. Enter a number from 1-9999 to specify the location on the output record for the P. O. Box-only ZIP Code indicator. Addresses located within a P. O. Box-only delivery zone can only receive postal delivery through the use of a P. O. Box. No other postal delivery method is available for these addresses.</p> <ul style="list-style-type: none"> • Y — P. O. Box-only ZIP Code. • Blank — Not a P. O. Box-only ZIP Code.
Location for Valid ZIP Code flag	<p>Optional. Enter a number from 1-9999 to specify the location on the output record for the Valid ZIP Code flag.</p> <ul style="list-style-type: none"> • Y — Input City, State, and ZIP Code correspond. • N — Input city, state, ZIP Code do not correspond, or is invalid. • Blank — ZIP Code could not be determined for input address.

Defining ZIP Code Information

Use the ZIP Code Storage Options screen to define the ZIP Code information to store in your output file. To access the ZIP Code Storage Options screen:

1. From the Name/Address Record Posting screen, page down to the ZIP Code Storage Options screen (C1CPOD015).
2. Use the following table to complete the fields on the ZIP Code Storage Options screen.

Field Name	Description
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Store ZIP if any information was dropped during standardization?	Optional. Code indicating whether the standardized ZIP Code should be stored when information was dropped during the matching process. <ul style="list-style-type: none"> • Y — Store the ZIP Code anyway. • N — Do not store if information was dropped. • Blank — Default is Y.
Max Correctness for storage	
Address	Optional. Enter a number from 0-9 to specify the maximum acceptable address probability of correctness to store the standardized ZIP Code. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9 .
Overall	Optional. Enter a number from 0-9 to specify the maximum acceptable overall probability of correctness to store the standardized ZIP Code. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9 .
Store if multiple ZIP Code matches are found?	Optional. Code indicating whether the standardized ZIP Code should be stored when multiple ZIP Code matches were found. <ul style="list-style-type: none"> • Y — Store the standardized ZIP Code anyway. • N — Do not store the standardized ZIP Code. Instead, store the information indicated in the Disposition field below. • Blank — Default is N.
What should be stored if a ZIP is not matched or is not stored due to storage options above?	Optional. Code indicating what should be stored in cases where the standardized ZIP Code was not stored either because no match was found, or due to storage conditions. <ul style="list-style-type: none"> • B — Store blanks. • X — Store nothing. • I — Store input ZIP Code. • Z — Store zeros. • Blank — Default is I.

Field Name	Description
Store input ZIP if it is Unique and does not correlate with the input city/state?	<p>Optional. Code indicating whether the Input ZIP Code should be returned if it is unique and does not correlate with the input city/state.</p> <ul style="list-style-type: none"> • Y — Store the information. • N — Do not store the Input ZIP Code. • Blank — Default is N. <p>Note: If Y is chosen, a non-CASS certified configuration will be created. No PS 3553 Form will be generated.</p>

Defining Carrier Route Location

Use the Carrier Route Storage Screen to define the locations and lengths of the Carrier Route information to store in your output file. To access the Carrier Route Storage screen:

1. From the Name/Address Record Posting screen, page down to the Carrier Route Storage screen (C1CPOD020).
2. Use the following table to complete the fields on the Carrier Route Storage screen.

Field Name	Description
Location for Carrier Route Return Code	<p>Optional. Enter a number from 1- 9999 to define the location on the output record for the 1-byte carrier route return code described below.</p> <p>Blank The match attempt was successful.</p> <p>A Apartment number missing or not found in database, and an apartment-level match was required.</p> <p>B Insufficient (or blank) address match information.</p> <p>H House/box number not found on street.</p> <p>M Multiple matches of equal quality were found.</p> <p>S Street name not found in ZIP Code.</p> <p>Z ZIP Code not found in database.</p> <p>No default.</p>

Field Name	Description
Location for Carrier Route Code	Optional. Enter a number from 1-9999 to define the location on the output record for the 4-byte carrier route code. No default.

Defining Carrier Route Information

Use the Carrier Route Storage Options Screen to define the Carrier Route information to store in your output file. To access the Carrier Route Storage Options screen:

1. From the Name/Address Record Posting screen, page down to the Carrier Route Storage Options screen (C1CPOD025).
2. Use the following table to complete the fields on the Carrier Route Storage Options screen.

Field Name	Description
Store CRRT if any information was dropped during standardization?	Optional. Code indicating whether to store the carrier route code if information was dropped during the matching process. <ul style="list-style-type: none"> • Y — Store the carrier route code anyway. • N — Do not store the carrier route code. • Blank — Default is Y.
Max Correctness for storage	
Address	Optional. Enter a number from 0-9 to specify the maximum acceptable address probability of correctness to store the carrier route code. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9 .
Overall	Optional. Enter a number from 0-9 to specify the maximum acceptable overall probability of correctness to store the carrier route code. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9 .

Field Name	Description
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Store if multiple CRRT matches are found?	<p>Optional. Code indicating whether the standardized carrier route code should be stored when multiple carrier route code matches were found.</p> <ul style="list-style-type: none"> • Y — Store the standardized the carrier route code. • N — Do not store the standardized the carrier route code. Instead, store the information indicated in the “What should be stored if a CRRT is not matched or is not stored due to storage options above?” field below. • Blank — Default is N.
Store if multiple ZIP matches are found?	<p>Optional. Code indicating whether the standardized carrier route code should be stored if multiple matching ZIP Codes were found.</p> <ul style="list-style-type: none"> • Y — Store the returned carrier route code. • N — Do not store the standardized the carrier route code. Instead, store the information indicated in the “What should be stored if a CRRT is not matched or is not stored due to storage options above?” field below. • Blank — Default is N.
What should be stored if a CRRT is not matched or is not stored due to storage options above?	<p>Optional. Code indicating what should be stored in cases where the standardized carrier route code was not stored either because no match was found, or due to storage conditions.</p> <ul style="list-style-type: none"> • B — Store blanks. • I — Store carrier route code from the input record. • X — Store nothing. • Blank — Default is B.

Defining ZIP + 4 Add-On Locations

Use the ZIP + 4 Add-On Storage screen (C1CPOD030) to define the locations and lengths of the ZIP + 4 add-on information to store in your output file. To access the ZIP + 4 Add-On Storage screen:

1. From the Name/Address Record Posting screen, page down to the ZIP + 4 Add-On Storage screen (C1CPOD030).
2. Use the following table to complete the fields on the ZIP + 4 Add-On Storage screen.

Field Name	Description
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Location for ZIP + 4 Return Code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte ZIP + 4 return code described below:</p> <ul style="list-style-type: none"> • Blank — The match attempt was successful. • 7 — The ZIP+4 was suppressed. Record matched to an R777 (phantom) carrier route. • A — Apartment number missing or not found in database, and an apartment-level match was required. • B — Insufficient (or blank) address match information. • H — House/box number not found on street. • M — Multiple matches of equal quality were found. • S — Street name not found in ZIP Code. • V — USPS non-deliverable ZIP + 4 Code. • Z — ZIP Code not found in database. <p>No default.</p>
Location for ZIP + 4 code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the ZIP + 4 Code. No default.</p>
Format of ZIP + 4 Code	<p>Optional. Format of the ZIP + 4 Code on the output record:</p> <ul style="list-style-type: none"> • C — 4-byte EBCDIC number. • P — 3-byte packed number. • - — 4-byte EBCDIC number stored with a preceding hyphen (-). • Blank — No default.
Location for DPBC Add-on, without check digit	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 2-byte Delivery Point Barcode, without the 1-byte check digit. No default.</p>
Location for DPBC Add-on, check digit	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte Delivery Point Barcode check digit. No default.</p>

Field Name	Description
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Location for DPBC (Delivery Point Barcode)	Optional. Enter a number from 1-9999 to define the location on the output record for the 6-byte Delivery Point Barcode. No default.
Location for DPBC Add-on with Check-Digit	Optional. Enter a number from 1-9999 to define the location on the output record for the 2-byte Delivery Point Barcode add-on with the 1-byte check digit. No default.
Suppress DPBC if R777 Carrier Route detected?	Controls whether to suppress ZIP + 4 for addresses assigned a phantom Carrier Route of R777 (not eligible for street delivery). <ul style="list-style-type: none"> • Y — Yes, if R777 Carrier Route is found, add to the ZIP+4 Suppressed Count on the USPS Form 3553. R777 addresses are not deliverable. Do not store the ZIP+4 (DPBC). • Blank — If R777 Carrier Route is found, do not add to the ZIP+4 Suppressed Count on the USPS Form 3553. R777 addresses are deliverable. Store the ZIP+4 (DPBC).
Location for Z4CHANGE Option return code	Optional. Enter a number from 1-9999 to define the location on the output record for the Z4CHANGE return code described below: <ul style="list-style-type: none"> • 0 — Address matching was not performed for this record. • 4 — Address matching was performed for this record. • 8 — A fatal error occurred. • Blank — No default.
Location for Vintage date of CODE-1 Plus Database	Optional. Enter a number from 1-9999 to define the location on the output record for the Master File vintage date. No default.
Format of Vintage Date	Required if Position field is filled in. Format of the Master File vintage date on the output record (YYMM or YYYYMM). <ul style="list-style-type: none"> • B — 2-byte binary number (YYMM). • C — 4-byte character number (YYMM). • P — 3-byte packed number (YYMM). • 3 — 3-byte binary number (YYYYMM). • 4 — 4-byte packed number (YYYYMM). • 6 — 6-byte character number (YYYYMM).

Defining ZIP + 4 Add-On Information

Use the ZIP + 4 Add-On Storage Options screen to define the ZIP + 4 information to store in your output file. To access the ZIP + 4 Add-On Storage Options screen:

1. From the Name/Address Record Posting screen, page down to the ZIP + 4 Add-On Storage Options screen (C1CPOD035).
2. Use the following table to complete the fields on the ZIP + 4 Add-On Storage Options screen.

Field Name	Description
Store ZIP+4 if any information was dropped during standardization?	Optional. Code indicating whether the standardized ZIP + 4 and DPBC should be stored when information was dropped during the standardization process: <ul style="list-style-type: none">• Y — Store the information anyway.• N — Do not store if information was dropped.• Blank — Default is Y.
Max Correctness for storage:	
Address	Optional. Enter a number from 0-9 to define the maximum acceptable address probability of correctness to store the standardized ZIP + 4 and DPBC. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9 .
Overall	Optional. Enter a number from 0-9 to define the maximum acceptable overall probability of correctness to store the standardized ZIP + 4 and DPBC. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9.
Store if multiple ZIP+4 matches are found?	Optional. Code indicating whether the standardized ZIP + 4 and DPBC should be stored when multiple ZIP + 4 matches were found: <ul style="list-style-type: none">• Y — Store the standardized ZIP + 4 and DPBC anyway.• N — Do not store the standardized ZIP + 4 and DPBC. Instead, store the information indicated in the Disposition field below.• Blank — Default is N.

Field Name	Description
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If Y, write to NCO file?	<p>Optional. Code indicating whether to write the results to the NCO file, if multiple ZIP + 4 Codes are found during processing:</p> <ul style="list-style-type: none"> • Y — Write the results to the NCO file. • N — Do not write the results to the NCO file. • Blank — Default is N.
Store if multiple ZIP Code matches are found?	<p>Optional. Code indicating whether the standardized ZIP + 4 and DPBC should be stored when multiple ZIP Code matches were found:</p> <ul style="list-style-type: none"> • Y — Store the standardized ZIP + 4 and DPBC anyway. • N — Do not store the standardized ZIP + 4 and DPBC. Instead store the information indicated in the “What should be stored if a ZIP+4 is not matched or is not stored due to storage options above?” field below. • Blank — Default is N.
Write to NCO file if ZIP+4 is '0000' or '9999'	<p>Optional. Code indicating the output file to write the record to when ZIP + 4 is zeros or “9999”:</p> <p>N Write the record to the NCO file.</p> <p>Blank Write the record to the COK file.</p>
What should be stored if a ZIP+4 is not matched or is not stored due to storage options above?	<p>Optional. Code indicating what should be stored in cases where the standardized ZIP + 4 and DPBC were not stored, either because no match was found, or due to storage conditions:</p> <ul style="list-style-type: none"> • B — Store blanks. • I — Store input ZIP + 4 Code. • X — Store nothing. • Z — Store zeros. • Blank — Default is B.

Defining Standardized Address Locations

Use the Standardized Address Storage screen to define locations and lengths of the standardized address information to store in your output file. To access the standardized Address Storage screen:

1. From the Name/Address Record Posting screen, page down to the Standardized Address Storage screen (C1CPOD040).
2. Use the following table to complete the fields on the Standardized Address Storage screen.

Field Name	Description
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Location for standardized address with apartment	
--	--

Replace Input?	<p>Optional. Code indicating whether to replace the input address with the standardized address (with apartment).</p> <ul style="list-style-type: none">• Y — Replace the input address with the standardized address (with apartment). Store the standardized address in the address line that corresponds to the line originally occupied in the input file.• N — Do not replace the input address with the standardized address (with apartment). Instead, specify a location on the output record to store the standardized address (with apartment).• A — Store the standardized address (with apartment) in the most significant address line. The most significant input address line is the last address line defined by the ADDRDF parameter.• Blank — No default. <p>Note: For more information and examples, see the SA OUT parameter description in your <i>CODE-1 Plus Reference Guide</i>.</p>
If Y/A: Blank out unused address lines?	<p>Optional. This field is only applicable if you specify "Y" or "A" in the "Replace Input?" field.</p> <ul style="list-style-type: none">• Y — Blank out unused address lines.• N — Do not blank out unused address lines.• Blank — No default.

Field Name	Description
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If N: Specify storage location	<p>Required. This field is only applicable if you specify "N" in the "Replace Input?" field.</p> <ul style="list-style-type: none"> • Posn — Enter a number from 1-9999 to define the starting location in the output record to store the standardized address (with apartment). No default. • Len — Enter a number from 1-99 to define the length in the output record for the standardized address (with apartment). No default.
Store Input Addr if Std Addr too long or no match?	<p>Optional. This field determines what to store in the output record if the standardized address (with apartment) is too long or no match was found for the standardized address (with apartment).</p> <ul style="list-style-type: none"> • Y — Store the input address. • N — Do not store the input address. Store blanks in the output record. • Blank — Default is N.
Location for standardized address without apartment	
Posn	<p>Optional. Enter a number from 1-9999 to define the location on the output file for the standardized address, excluding apartment information. No default.</p>
Len	<p>Optional. Enter a number from 1-99 to define the length on the output file for the standardized address, excluding apartment information.</p>
Replace even if already stored?	<p>Optional. Enter Y to store the standard address without apartment even if it is already stored with apartment.</p> <ul style="list-style-type: none"> • Y — Store the standard address. • N — Do not store the standard address. • Blank — No default.
Location for Apt/PMB number	
Posn	<p>Optional. Enter a number from 1-9999 to define the location on the output file for the standardized address, excluding apartment information. No default.</p>

Field Name	Description
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Len	Optional. Enter a number from 1-99 to define the length on the output file for the standardized address, excluding apartment information. No default.
Treatment if Std Address with Apt already stored?	Optional. Code indicating what should be stored if the Standardized Address with Apt is already stored: <ul style="list-style-type: none"> • Y — Replace. Do not store apartment information if successfully stored in standardized address with apartment. • P — Store input PMB number. • X — Store apartment information. • Blank — No default.
Location for Standardized address return code	Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte address return code described below: <p>Blank The address match attempt was successful.</p> <p>A Apartment number missing or not found in database, and an apartment-level match was required.</p> <p>B Insufficient (or blank) address information for a match.</p> <p>C The record's probable correctness was higher than the specified maximum.</p> <p>D Information was dropped during the address match attempt.</p> <p>H House/Box number not found on this street.</p> <p>L The returned address was too long to be stored.</p> <p>M Multiple matches were found.</p> <p>S Street name not found in ZIP Code.</p> <p>Z ZIP Code was not found on database.</p>
Location for PMB return code	Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte code indicating the disposition of the PMB number: <p>A Append to standardized address.</p> <p>S Secondary address input.</p> <p>L Returned address was too long to be stored.</p>

Field Name	Description
Location for source of matched address return code	Optional. Enter a number from 1-9999 to define the location on output record for the 1-byte matched address return code. M Both address lines. P Primary address line only. S Secondary address line only.
Location for dropped information type return code	Optional. Enter a number from 1-9999 to define the location on output record for the 1-byte dropped information type return code: A Street and address information. R RR/Box information. W Miscellaneous words and characters.
Location of LACS indicator	Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte LACS indicator. No default.

Defining Standardized Address Information

Use the Standardized Address Storage Options Screen to define the standardized address information to store in your output file.

Base and Alias Street Names

In the USPS database, streets may have more than one name. All streets have one and only one base street name and may have one or more alias street names. Base and alias street names refer to a portion of the street, such as a house range or group of ranges. Both are valid, USPS deliverable addresses.

The USPS identified three types of alias street names:

- USPS-preferred street name
- Official street name change as a result of a chamber of commerce action

- Other

If the alias street name is a “preferred alias,” CODE-1 Plus always stores the alias name instead of the base name.

If the alias street name is an “official street name change,” CODE-1 Plus always stores the base name instead of the alias name.

If the alias street name is of type “other,” CODE-1 Plus stores the alias or base, depending on the option you choose on the **Return Base Street Name if Alias is matched?** field.

To access the Standardized Address Storage Options screen:

1. From the Name/Address Record Posting screen, page down to the Standardized Address Storage Options screen (C1CPOD045).
2. Use the following table to complete the fields on the Standardized Address Storage Options screen.

Field Name	Description
Return Base Street Name if Alias is matched?	<p>Optional. Code indicating whether to return a base street name if the input record alias street name matched.</p> <ul style="list-style-type: none"> • Y — Store the base street name. • N — Do not store the alias street name. • Blank — Default is N.
Location for Alias Return Code:Position	<p>Optional. Enter a number from 1-9999 to define the location on the output record to store the alias/base return code described below:</p> <ul style="list-style-type: none"> • Blank — The input address matched a base street. • A — The input address matched an alias street name. <p>No default.</p>

Field Name	Description
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Location for Alias Type Code:Position	<p>Optional. Enter a number from 1-9999 to define the location on the output record to store the alias type code described below:</p> <ul style="list-style-type: none"> • P — The alias was a preferred street name. • C — The alias was an official street name change. • 0 — The alias was some other type of alias. • Blank — The address did not match an alias street name or no match was obtained. <p>No default.</p>
Store Std Address if any information was dropped during standardization?	<p>Optional. Code indicating whether the standardized address should be stored when information is dropped during the standardization process:</p> <ul style="list-style-type: none"> • Y — Store the information anyway. • N — Do not store if information is dropped. • Blank — Default is Y.
Store if multiple Std Addr matches are found?	<p>Optional. Code indicating whether the standardized address should be stored when multiple address matches were found:</p> <ul style="list-style-type: none"> • Y — Store the standardized address anyway. • N — Do not store the standardized address. Instead, store the information indicated in the Disposition field below. • Blank — Default is N.
Store if multiple ZIP matches are found?	<p>Optional. Code indicating whether the standardized address should be stored when multiple ZIP Code matches were found.</p> <ul style="list-style-type: none"> • Y — Store the standardized address anyway. • N — Do not store the standardized address. Instead, store the information indicated in the Disposition field below. • Blank — Default is N.
Max Correctness for storage:	

Field Name	Description
Address	Optional. Enter a number from 0-9 to define the maximum acceptable address probability of correctness to store the standardized address. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9 .
Overall	Optional. Enter a number from 0-9 to define the maximum acceptable overall probability of correctness to store the standardized address. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9 .
What should be stored if a Std Addr is not matched	Optional. Code indicating what should be stored in cases where the standardized address was not stored, either because no match was found or because of specified storage conditions. <ul style="list-style-type: none"> • B — Store blanks. • X — Store nothing. • Blank — Default is B.

Defining Additional Standardized Address Locations

Use the Standardized Address Storage screen to define locations and lengths of additional standardized address information to store in your output file. To access the Standardized Address Storage screen:

1. From the Name/Address Record Posting screen, page down to the Standardized Address Storage Options screen (C1CPOD050).
2. Use the following table to complete the fields on the Standardized Address Storage Options screen.

Field Name	Format	Description	Comments
Location for Formatted PMB			

Field Name	Format	Description	Comments
Posn	Number from 1-9999	Optional. Enter a number from 1-9999 to define the location on the output record for the formatted Private Mail Box (PMB) when presented in a separately-defined input address line. No default.	Optional.
Len	Number from 1-99	Required if the location is specified in Posn field. Enter a number from 1-99 to define the length of the PMB information on the output record. No default.	Required if the location is specified in position 8-12.
Should Preferred Alias Processing be performed	Y or N	Required for CASS certification. Indicates if preferred alias processing should be performed: <ul style="list-style-type: none"> • Y — Perform preferred alias processing. A “Y” in this position is required to generate a USPS FORM 3553 report. • N — Do not perform preferred alias processing. “N” generates a non-CASS-certified configuration. The USPS FORM 3553 is not generated. • Blank — Default is N. 	Required for CASS certification
Location for Preferred Alias Processing Return Code	Number from 1-9999	Enter a number from 1-9999 to define the location on the output record for the 1-byte Preferred Alias Processing Return Code described below: <ul style="list-style-type: none"> • Blank — No preferred alias processing attempted. • A — Input address matched to an alias (preferred alias processing is only attempted for base addresses). • N — Did not match to preferred alias. • Y — Matched to preferred alias. 	
Should Abbreviated Alias Processing be performed	Y or N	Indicates if abbreviated alias processing should be performed: <ul style="list-style-type: none"> • Y — Perform abbreviated alias processing. • N — Do not perform abbreviated alias processing. • Blank — Default is N. 	

Field Name	Format	Description	Comments
Location for Abbreviated Alias Processing Return Code	Number from 1-9999	<p>Location on the output record for the 1-byte abbreviated alias processing return code described below:</p> <p>Blank No abbreviated alias processing attempted.</p> <p>B Output address set to base address.</p> <p>L Original standardized address length already <= max.</p> <p>N Abbreviated alias not found for input address.</p> <p>Y Abbreviated alias found for input address and used in output standardized address.</p>	
Enhanced Alternate High Rise Match Storage Option	A or B	<p>Optional. Code indicating whether the enhanced alternate high rise match should be returned:</p> <ul style="list-style-type: none"> • B — Return Base Address. • A — Return Alternate Address. • Blank — Default is B. <p>Note: Selecting A will generate a non-CASS-certified configuration. No USPS FORM 3553 will be generated.</p>	Optional.Default is B
Location for Seasonal Delivery Flags	Number from 1-9999	<p>Enter a number from 1-9999 to define the location of the 12-byte code indicating when mail can be delivered to a specific ZIP Code described below:</p> <ul style="list-style-type: none"> • Y — Mail can be delivered. • N — Mail cannot be delivered. 	
Location for PreciselyID	Number from 1-9999	Enter a number from 1-9999 to define the location of the PreciselyID, a 12-byte unique identifier for the addressable location	Optional.

Field Name	Format	Description	Comments
Location for PreciselyID Return Code	Number from 1-9999	<p>Enter a number from 1-9999 to define the location of the single character identifying if a PreciselyID unique identifier was found for the address</p> <ul style="list-style-type: none"> • Y — PreciselyID was found for the full address. • D — PreciselyID was found for the primary address (secondary information was dropped to find a match). • N — PreciselyID was not found • Blank — PreciselyID database was not queried. 	Optional

Defining Address Element Locations

Use the Address Element Storage screen to define the location and length of the address element information to store in your output file. To access the Address Element Storage screen:

1. From the Name/Address Record Posting screen, page down to the Address Element Storage screen (C1CPOD060).
2. Use the following table to complete the fields on the Address Element Storage screen.

Field Name	Description
House Number:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the left-justified 10-byte house number. No default.
Leading Directional:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the 2-byte leading directional. No default.
Street Name:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the street name. No default.

Field Name	Description
Street Name: Len	Optional. Enter a number from 1-99 to define the length of the street name on the output record. No default.
Suffix:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the 4-byte street suffix. No default.
Trailing Directional:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the 2-byte trailing directional. No default.
Apartment Designator:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the 4-byte apartment designator. No default.
Apartment Number:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the 8-byte left-justified apartment number. No default.
RR/HC Type:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the 2-byte rural route/highway contract route type code. No default.
RR/HC Number:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the 3-byte rural route/highway contract route number. No default.
Box Number:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the left-justified 10-byte box number. No default.
Private Mail Box Designator:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the left-justified 4-byte Private Mail Box Designator. <ul style="list-style-type: none"> • PMB — Standard Private Mailbox Designator. • # — Nonstandard Private Mailbox Designator. • Blank — No default.
Private Mail Box Number:Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the Private Mailbox Number. No default.

Field Name	Description
Private Mail Box Number: Len	Optional. Enter a number from 1-99 to define the length of the Private Mailbox Number on the output record. No default.
Store All Private Mail Box Numbers?	Optional. You can choose to store all Private Mail Box Numbers or just standard Private Mail Box Numbers. Default is N . NOTE: If all Private Mail Box Numbers are stored, a non-CASS certified configuration will be created. No PS Form 3553 will be generated.
What should be stored when Standardized Address is not avail	Optional. Code indicating what should be stored in cases where standardized elements could not be stored (because no match was found). Type one of the following codes: <ul style="list-style-type: none"> • B — Store blanks. • M — Store elements from normalized address, merging secondary address line elements with primary address line elements, but giving precedence to the primary address line elements. • N — Store elements from normalized address. • X — Store nothing. • Blank — Default is B.

Defining City and State Locations

Use the City and State Storage screen to define the location and length of the city and state information to store in your output file. To access the City and State Storage screen:

1. From the Name/Address Record Posting screen, page down to the City and State Storage screen (C1CPOD070).
2. Use the following table to complete the fields on the City and State Storage screen.

Field Name	Description
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Location for City/State return code:Posn	<p>Optional. Location on the output record for a 1-byte city/state return code that indicates why the output city/state was/was not stored. One of these codes is stored:</p> <ul style="list-style-type: none"> • Blank — An output city/state was stored. • A — Apartment number missing or not found in database, and an apartment-level match was required. • B — Insufficient or blank address match information. • H — House/box number not found on street. • M — Multiple matches of equal quality were found. • S — Street name not found in ZIP Code. • Z — ZIP Code not found in database. <p>No default.</p>
Formatted City/State Line	
Replace Input?	<p>Optional. Specifies whether to store the standardized city/state in the same location as the input city/state line.</p> <ul style="list-style-type: none"> • Y — Store in the same location as the input city/state. • N — Do not store in the same location as the input city/state. • Blank — Default is N.
Replace Input:Posn	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the standardized city/state line. No default.</p> <p>NOTE: If you choose NOT to replace input, you must specify these fields to store the formatted city/state line.</p>
Replace Input:Len	<p>Optional. Enter a number from 1-99 to define the length of the standardized city/state line. No default.</p>

Field Name	Description
Format	<p>Optional. Format of the standardized city/state line:</p> <ul style="list-style-type: none"> • 9 — City, state, ZIP Code, and ZIP + 4 Code. • S — City and state only. • Z — City, state, and 5-digit ZIP Code. • Blank — No default.
Location for City Name:Posn	<p>Optional. Enter a number from 1-9999 to define the output location for the returned city name (28-character form if it fits, else short). No default.</p>
Location for City Name:Len	<p>Optional. Enter a number from 1-99 to define the length of the returned city name. No default.</p>
If no match is found, store city from Input or ZIP Code?	<p>Optional. Code indicating what should be stored when no address match is found:</p> <ul style="list-style-type: none"> • I — Store the input city name. • Z — Store the primary city for the valid input ZIP Code. If you specify "Z", CODE-1 Plus does not generate a USPS Form 3553 (CASS Summary Report). • X — Store the missing primary city and state for the valid input ZIP Code. Also, store the locality county code for the valid input ZIP Code or valid input city/state. If you specify "X", CODE-1 Plus does not generate a USPS Form 3553 (CASS Summary Report). • Blank — Store the information indicated in the "What should be stored if a City/State is not matched or is not stored due to storage options above?" field on the City and State Storage Options screen (C1CPOD073).
Store input short city name?	<p>Optional. Code indicating what should be stored when the input city name is the short city name.</p> <ul style="list-style-type: none"> • Y — Store input city name. • N — Store standardized city name. • Blank — Default is N.
Location for City Name (short form):Posn	<p>Optional. Enter a number from 1-9999 to define the output location for the 13-byte short city name. No default.</p>

Field Name	Description
Location for State Abbreviation (USPS Standard):Posn	Optional. Enter a number from 1-9999 to define the output location for the 2-byte state abbreviation.
Store input if no match is found?	Optional. Code indicating what should be stored when no state match is found: <ul style="list-style-type: none"> • Y — Store the input state abbreviation. • N — Store the information indicated in the "What should be stored if a City/State is not matched or is not stored due to storage options above?" field on the City and State Storage Options screen (C1CPOD073). • Blank — Default is N.
USPS Urbanization name:Posn	Optional. Enter a number from 1-9999 to define the output location for the USPS urbanization name. No default.
Store if multiple Urbanization names are found?	Optional. Code indicating whether to store the standardized urbanization name when multiple matches were found on the database. <ul style="list-style-type: none"> • Y — Store the standardized urbanization name. • N — Store nothing. • Blank — Default is N.

Defining City and State Information

Use the City and State Storage Options screen to define the city and state information to store in your output file. To access the City and State Storage Options screen:

1. From the Name/Address Record Posting screen, page down to the City and State Storage Options screen (C1CPOD073).
2. Use the following table to complete the fields on the City and State Storage Options screen.

Field Name	Description
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Store City/State if any information is dropped during standardization?	Optional. Code indicating whether the standardized city/state line should be stored when information was dropped during the standardization process: <ul style="list-style-type: none"> • Y — Store the information anyway. • N — Do not store if information was dropped. • Blank — Default is Y.
Max Correctness for storage:	
Address	Optional. Enter a number from 0-9 to define the maximum acceptable address probability of correctness to store the standardized city/state line. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9 .
Overall	Optional. Enter a number from 0-9 to define the maximum acceptable overall probability of correctness to store the standardized city/state line. Type a number between 0 and 9, where 0 indicates the best case and 9 indicates the worst case. Default is 9 .
Store default City if City not matched	Optional. Code indicating what should be stored when no city name match was found: <ul style="list-style-type: none"> • Y — Store the default city name. • N — Store the information indicated in the "What should be stored if a City/State is not matched or is not stored due to storage options above?" field. • Blank — Default is Y.
Store if multiple ZIP + 4 matches are found?	Optional. Code indicating whether the standardized city/state line should be stored when multiple ZIP + 4 matches were found: <ul style="list-style-type: none"> • Y — Store the standardized city/state line anyway. • N — Do not store the standardized city/state. Instead, store the information indicated in the "What should be stored if a City/State is not matched or is not stored due to storage options above?" field. • Blank — Default is N.

Field Name	Description
Store if multiple ZIP Code matches are found?	<p>Optional. Code indicating whether the standardized city/state line should be stored when multiple ZIP Code matches were found:</p> <ul style="list-style-type: none"> • Y — Store the standardized city/state line anyway. • N — Do not store the standardized city/state line. Instead, store the information indicated in the "What should be stored if a City/State is not matched or is not stored due to storage options above?" field. • Blank — Default is N.
What should be stored if a City/State is not matched or is not stored due to storage options above?	<p>Optional. Code indicating what should be stored in cases where the standardized city/state line was not stored, either because no match was found or due to storage conditions:</p> <ul style="list-style-type: none"> • B — Store blanks; removes any old information in the output city and state field. Ensures you will be able to detect when a record did not receive a city and state. • X — Store nothing. • Blank — Default is B.

Defining County and Congressional Location

Use the County and Congressional Storage Option screen to define the location and length of the county and congressional information to store in your output file. To access the County and Congressional Storage Option screen:

1. From the Name/Address Record Posting screen, page down to the County and Congressional Storage Option screen (C1CPOD076).
2. Use the following table to complete the fields on the City and State Storage Options screen.

Field Name	Description
Location of County Name	<p>Optional. Enter a number from 1-9999 to define the location of the county where the address resides. No default.</p>

Field Name	Description
Location of the FIPS County Code	Optional. Enter a number from 1-9999 to define the county code of the matched address. No default.
Location for the Congressional District	Optional. Enter a number from 1-9999 to define the USPS-assigned, 2-digit number representing the address' congressional district. No default.
Preferred last line city name storage option	Optional. Code indicating whether the preferred last line city name should be stored: <ul style="list-style-type: none"> • C — Store the USPS-preferred City Name from USPS City/State File.NOTE: If you select C, CODE-1 Plus does not generate a CASS certified configuration and does not generate the USPS 3553 Report. • P — Store the Primary City Name from the USPS City/State File.NOTE: If you select P, CODE-1 Plus does not generate a CASS certified configuration and does not generate the USPS 3553 Report. • Z — Store the Preferred Last Line City Name from the USPS ZIP+4 File (Override City Name). (See the AM2OUT parameter for a description of the Override City Name.)NOTE: If you select Z, CODE-1 Plus generates a CASS certified configuration and the USPS 3553 Report. • Blank — Default is Z.

Defining Address Match Locations

Use the Address Match Information Storage screen to define the location and length of the address matching information to store in your output file.

Return Codes

Address matching return codes provide results of attempts to match input records against the information in the CODE-1 Plus database. These codes are very useful when you are analyzing CODE-1 Plus processing results.

Match Scores

Match scores for street and firm names indicate the level of similarity between the information returned as the result of a match and the information extracted from your input file. The comparison is “scored” on a scale of 0 to 9, with 0 being an exact match.

Other Address Matching Information

You can also use this screen to specify the output location for the USPS standard record type code and the number of I/O reads CODE-1 Plus had to execute in order to determine a match.

To access the Address Match Information Storage screen:

1. From the Name/Address Record Posting screen, page down to the Address Match Information Storage screen (C1CPOD080).
2. Use the following table to complete the fields on the Address Match Information Storage screen.

Field Name	Description
USPS Record Type	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte USPS record type code described below:</p> <ul style="list-style-type: none">• F — Firm.• G — General delivery.• H — High-rise (apartment complex).• P — Post office box.• R — Rural route or highway contract.• S — Normal street address. <p>Blank — No default.</p> <p>NOTE: CODE-1 Plus will not produce the USPS 3553 form if the USPS Record Type Code is posted.</p>

Field Name	Description
General Return Code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte general return code:</p> <ul style="list-style-type: none"> • Blank — Successful address match attempt. • A — Apartment number missing or not found in database, and an apartment-level match required. • B — Insufficient (or blank) address information. • F — Input firm does not match. • H — House/box range not found on street. • M — Multiple matches found. • S — Street name not found in ZIP Code. • Z — ZIP Code not found in database. <p>Blank — No default.</p>
Directional Return Code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte directional return code described below:</p> <ul style="list-style-type: none"> • Blank — No directional match was found on database. • D — The directional does not match the database. • F — The complete directional does not match the database, but its first character does (for example, N vs. NW). • N — No directional was found on the input address, but a directional was present on the database. <p>No default.</p>
Suffix Return Code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte suffix return code described below:</p> <ul style="list-style-type: none"> • Blank — No suffixed match was found. • N — No suffix was found on the input address, but a suffix was present on the database. • S — The suffix does not match the database. <p>No default.</p>

Field Name	Description
Apartment Return Code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte apartment return code described below:</p> <ul style="list-style-type: none"> • Blank — No address match or apartment (or lack thereof matches the database. • A — The apartment does not match the database. • N — No apartment was found on the input address, but an apartment was present on the database at the street address. <p>No default.</p>
Firm-name Return Code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte firm-name return code:</p> <ul style="list-style-type: none"> • Blank — No address match or firm-name match was found, or no firm name was indicated in the input record. • F — The input firm name does not match the database. • M — A firm name was present in the input record, but there were no firm names on the database for the matched address. <p>No default.</p>
Overall Probable Correctness Code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte overall probability of correctness:</p> <ul style="list-style-type: none"> • Blank — No match was found. • 0 — The match is exact. • 1-8 — The match has an intermediate probability of correctness on a sliding scale. • 9 — The match is least likely to be correct. <p>No default.</p>
Alternate Address Scheme Indicator	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the type of alternate address scheme to use to obtain a match:</p> <ul style="list-style-type: none"> • Blank — No alternate address scheme used. • D — Delivery point alternate logic used. • S — Small town default logic used. <p>U — Unique ZIP Code.No default.</p> <p>No default.</p>

Field Name	Description
Street-name Match Score	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte street-name match score.</p> <ul style="list-style-type: none"> • Blank — No match was found. • 0 — The match is exact. • 1-8 — The match has an intermediate probability of correctness on a sliding scale. • 9 — The match is least likely to be correct. <p>No default.</p>
Firm-name Match Score	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte firm-name match score.</p> <ul style="list-style-type: none"> • Blank — No match was found. • 0 — The match is exact. • 1-8 — The match has an intermediate probability of correctness on a sliding scale. • 9 — The match is least likely to be correct. <p>No default.</p>
Address Probable Correctness Code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte address probability of correctness.</p> <ul style="list-style-type: none"> • Blank — No match was found. • 0 — The match is exact. • 1-8 — The match has an intermediate probability of correctness on a sliding scale. • 9 — The match is least likely to be correct. <p>No default.</p>

Field Name	Description
ZIP Code Confirmed/Altered/Original indicator	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte code indicating if the ZIP Code has been confirmed, altered, or the original ZIP Code was returned:</p> <ul style="list-style-type: none"> • A — Altered — the original input ZIP Code was not stored; the ZIP Code used for a match was determined from the input address. • B — The ZIP Code was missing from input record; input ZIP Code field contains blanks. • C — Confirmed — the original input ZIP Code was stored, no match attempted was made. • O — Original — the original input ZIP Code was stored due to a match. <p>No default.</p>
VeriMove Universal Field	<p>Optional. Enter a number from 1-9999 to define the location on the output record for 250 bytes of additional information codes. This field is designed for use with the Precisely VeriMove move update product. No default.</p>

Defining Additional Address Match Locations

Use the Additional Address Match Information Storage screen to define the location and length of additional address matching information to store in your output file.

Delivery Sequence File (DSF2) footnotes

Delivery Sequence File (DSF²) footnotes are 2-character, USPS-defined codes that represent the changes that were made to the input address during the matching process. Up to 50 of these codes may be stored by CODE-1 Plus for each record. After CODE-1 Plus has finished processing, you can run your output file through a delivery sequence program (not provided by Precisely) to sort your records into delivery sequence. The delivery sequence program uses these footnotes to sort the records.

To access the Additional Address Match Information Storage screen (C1CPOD085):

1. From the Name/Address Record Posting screen, page down to the Address Match Information Storage screen (C1CPOD080).
2. Use the following table to complete the fields on the Additional Address Match Information Storage screen.

Field Name	Format	Description	Comments
ZIP+4 Base/Alternate record indicator:Posn	Number from 1-9999	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte code indicating whether the input address matched a ZIP + 4 base record or a ZIP + 4 alternate record described below.</p> <ul style="list-style-type: none"> • A — Input address matched a alternate ZIP + 4 record. • B — Input address matched a base ZIP + 4 record. <p>No default.</p>	Optional.No default.
USPS Last Line number:Posn	Number from 1-9999	<p>Optional. Enter a number from 1-9999 to define the location on the output file for the USPS 6-byte last line number from the output city. No default.</p>	Optional.No default.
USPS Finance number:Posn	Number from 1-9999	<p>Optional. Enter a number from 1-9999 to define the location on the output file for the USPS 6-byte finance number from the output ZIP + 4 Code. No default.</p>	Optional.No default.

Field Name	Format	Description	Comments
Array of Footnotes as required for USPS DSF ² File processing	Number from 1-9999	<p>Optional. Enter a number from 1-9999 to define the location on the output record for up to 50 2-character delivery sequence footnotes as listed below:</p> <ul style="list-style-type: none"> • AA — Record matched the ZIP + 4 database (the CODE-1 Plus database). • A1 — No match was found. • A2 — Alias street name matched to a base street name on the database. • A3 — Match was made to an alternate record on the database. • BB — Matched to the DSF² file. • B1 — No acceptable match was made to the DSF² file. • B2 — Alias street name matched a base street name on the DSF² file. • B3 — Match was made to an alternate record on the DSF² file. • CC — Matched the DSF² file but is missing secondary information. • D — City name or state was changed. • E — Primary address was changed. • F — Secondary address was changed. • H — ZIP Code was changed. • G — The delivery point is vacant. • J — City, state, and ZIP Code could not be validated. • K — Multiple matches in primary address. 	

Field Name	Format	Description	Comments
Array of Footnotes as required for USPS DSF ² File processing- continued		<p>K1 Multiple matches due to missing or incorrect directionals.</p> <p>K2 Multiple matches due to missing or incorrect suffix.</p> <p>G Delivery point is vacant.</p> <p>H Input ZIP Code was changed.</p> <p>I Input address could not be parsed.</p> <p>J Input city, state, and ZIP Code could not be validated.</p> <p>K Multiple matches were found for the primary address.</p> <p>K1 Multiple matches due to missing or incorrect directionals.</p> <p>K2 Multiple matches due to missing or incorrect suffixes.</p> <p>L Multiple matches were found in the secondary address.</p> <p>M1 Input street number was missing.</p> <p>M2 Address was not found on the database.</p> <p>M3 No such primary number.</p> <p>M4 Firm name not matched.</p> <p>N1 Secondary address number was missing.</p> <p>N2 Secondary address number was not found on the database.</p> <p>P1 Rural route or highway contact box number was missing.</p> <p>P2 Rural route or highway contact box number was not found on the database.</p> <p>Q1 P.O. Box number was missing.</p> <p>Q2 P.O. Box number was not found on the database.</p> <p>No default.</p> <p>NOTE: CODE-1 Plus uses the entire 100-byte array, back-filling with spaces as necessary.</p>	

Defining Extra Data Locations

Use the Extra Data Storage screen (C1CPOD090) to define the location and length of the additional input data and unmatched data to store in your output file. To access the Extra Data Storage screen:

1. From the Name/Address Record Posting screen, page down to the Extra Data Storage screen (C1CPOD090).
2. Use the following table to complete the fields on the Extra Data Storage screen.

Field Name	Description
Format of Extra Data	<p>Optional. A1-byte character that defines the format of the extra data in the output record.</p> <p>This field defines how two types of extra data display in the output record.</p> <ul style="list-style-type: none">• Additional input data - Any information that is defined on the input address lines but is not sent to the matcher for processing is identified as additional input data.• Unmatched data - Any information passed to the matcher that is not used in the matching process is identified as unmatched data. <p>Enter one of the following codes:</p> <ul style="list-style-type: none">• F - Fixed length format. Extra data will be posted “as is” in eleven output fields:• Six 100-byte length fields will contain additional input data (information that is defined on the input address lines but is not sent to the matcher for processing).• Five 100-byte length fields will contain unmatched data (information passed to the matcher that was not used in the matching process).• C - Concatenated format (separated by the character specified in the “For C=Concatenated, specify Field Separator” field on this screen): Additional input data (information that is defined on the input address lines but is not sent to the matcher for processing) is concatenated and written into one field. <p>No Default.</p>
For C=Concatenated, Specify Field Separator	<p>Optional. If you specified C (Concatenated) in the “Format of Extra Data” field, specify a character to separate the additional input data or the extra data from the matcher (unmatched data). Default is semicolon “;”.</p>

Field Name	Description
Location to post Additional Input Data	Optional. Enter a number from 1-9999 to define the location on the output record for additional input data (information that is defined on the input address lines but is not sent to the matcher for processing). No default.
Location to post Unmatched Data	Optional. Enter a number from 1-9999 to define the location on the output record for unmatched data (information passed to the matcher that is not used in the matching process). No default.

Defining Normalized/COA Information Locations

Use the Normalized and COA Information Storage screen to define the location and length of the normalized and care-of information to store in your output file. To access the Normalized and COA Information Storage screen:

1. From the Name/Address Record Posting screen, page down to the Normalized and COA Information Storage screen (C1CPOD095).
2. Use the following table to complete the fields on the Normalized and COA Information Storage screen.

Field Name	Description
Care-of Information, Address 1	
Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the "care-of" characters dropped from the primary address line. No default.
Len	Optional. Enter a number from 1-99 to define the length of the "care-of" characters dropped from the primary address line. No default.

Field Name	Description
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Care-of Information, Address 2

Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the "care-of" characters dropped from the secondary address line. No default.
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Len	Optional. Enter a number from 1-99 to define the length of the "care-of" characters dropped from the secondary address line. No default.
-----	---

Normalized Address

Condition	Optional. Condition under which the normalized primary address line should be stored: <ul style="list-style-type: none"> • A — Store for all records. • X — Store only when standardized address is not stored. • D — Store dropped dual address from matched address. • Blank — Default is X.
-----------	--

Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the normalized primary address line. No default.
------	--

Len	Optional. Enter a number from 1-99 to define the length of the normalized primary address line. No default.
-----	--

Normalized Address 2

Condition	Optional. Condition under which the normalized secondary address line should be stored: <ul style="list-style-type: none"> • A — Store for all records. • X — Store only when standardized address is not stored. • D — Store dropped dual address from matched address. • Blank — Default is X.
-----------	--

Field Name	Description
Posn	Optional. Enter a number from 1-9999 to define the location on the output record for the normalized secondary address line. No default.
Len	Optional. Enter a number from 1-99 to define the length of the normalized secondary address line. No default.
Normalized All Address Types	<p>Optional. Code indicating whether all address types or only selected address types should be normalized. The selected address types are "GENERAL DELIVERY" keywords, PO BOX keywords, and RR/HC keywords.</p> <ul style="list-style-type: none"> • Y — Normalize specified address line regardless of address type. • N — Normalize select address types otherwise return input. • Blank — Default is Y.

Defining Line of Travel Locations

Use the Line of Travel Storage screen to define the location and length of the Line of Travel information to store in your output file. To access the Line of Travel Storage screen.

1. From the Name/Address Record Posting screen, page down to the Line of Travel Storage screen (C1CPOD100).
2. Use the following table to complete the fields on the Line of Travel Storage screen.

Field Name	Description
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Location for LOT return code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte LOT return code described below:</p> <ul style="list-style-type: none"> • 9 — ZIP + 4 matched the LOT master file. • C — Call to LOT matcher failed. • D — Default coded. ZIP + 4 not found in the LOT master file. • F — Master file access failure. • V — Incompatible Master file. • Blank — ZIP Code and/or ZIP + 4 was neither numeric nor zeros. <p>No default.</p>
Location for Line of Travel Code (numeric portion)	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 4-byte numeric portion of the Line of Travel Code. No default.</p>
Location for Line of Travel Code (alphabetic portion)	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte alphabetic USPS sequence code. No default.</p>
Location for Alternate sequence code (alphanumeric format)	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 2-byte alternate sequence code used for sortation purposes. No default.</p>
Location for Alternate sequence code (hexadecimal format)	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-byte alternate sequence code used for sortation purposes. No default.</p>
What should be stored if LOT Code is not available?	<p>Optional. Code indicating what should be stored in cases where a LOT code was not determined.</p> <ul style="list-style-type: none"> • B — Store blanks. • X — Store nothing. • Blank — Default is B.

Defining Delivery Point Validation Locations

Use the Delivery Point Validation screen to define the location and length of the Delivery Point Validation (DPV) information to store in your output file. DPV Footnote Codes are 2-character, USPS-defined codes that represent the changes that were made to the input address during the matching process. Up to 10 of these codes can be stored by CODE-1 Plus for each record. Even if your address is not presented for DPV processing, CODE-1 Plus will return the footnote codes that pertain to the match to the ZIP + 4 database.

To access the Delivery Point Validation screen:

1. From the Name/Address Record Posting screen, page down to the Delivery Point Validation screen (C1CPOD110).
2. Use the following table to complete the fields on the Delivery Point Validation screen.

Field Name	Description
DPV Confirmation Indicator	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-character DPV Return Code:</p> <ul style="list-style-type: none">• N — No Delivery Point Validation.• Y — Delivery Point validated. Primary number valid and second number (when present) valid.• S — Valid primary number; but secondary number (primary for Rural Route) present and is not confirmed.• D — Valid primary number; input missing secondary number (primary Rural Route).• Blank — Address not presented to DPV table.
DPV CMRA Flag	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-character CMRA Flag. If the DPV confirmation indicator is Y, S, or D, CODE-1 Plus automatically begins a CMRA look-up.</p> <ul style="list-style-type: none">• Y — Yes, CMRA.• N — No, CMRA.• Blank — Not presented.

Field Name	Description
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DPV False/Positive Flag	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-character False/Positive Flag. If the DPV confirmation indicator is N, CODE-1 Plus automatically begins a false/positive look-up.</p> <ul style="list-style-type: none"> • Y — False. • N — Not false. • Blank — Not presented. <p>NOTE: A Y indicates that you have hit a “seed record” in your processing.</p>
DPV Footnote Codes	<p>Optional. Enter a number from 1-9999 to define the location on the output record for a 20-character area to accommodate the 2-character DPV Footnote Codes:</p> <ul style="list-style-type: none"> • AA — Input address matched to the ZIP+4 file. • A1 — Input address not matched to the ZIP+4 file. • BB — Input address matched to DPV (all components). • CC — Input address primary number matched to DPV but secondary number not match (present but not valid). • F1 — Input address is military; DPV bypassed. • G1 — Input address is general delivery; DPVbypassed. • M1 — Input address primary number missing. • M3 — Input address primary number invalid. • N1 — Input address primary number matched to DPV but high rise address missing secondary number. • P1 — Input address missing RR or HC Box number. • P3 — Input address missing PO, RR, or HC Box number. • PB — Input address is a P. O. Box Street Address (PBSA). • RR — Input address matched to CMRA. • R1 — Input address matched to CMRA but secondary number not present. • U1 — Input address is unique ZIP; DPVbypassed.

Field Name	Description
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DPV No Statistics	<p>Optional. Enter a number from 1-9999 to define the location on the output record for a 1-character code indicating the presence of statistics for this address. A “Y” indicates that the address is not a valid delivery address even though it has been validated by DPV.</p> <ul style="list-style-type: none"> • Blank — Not presented. • Y — Found match to ‘No Stat’ DPV hash table. • N — No match found to “No stat” DPV hash table.
DPV Vacant Table Flag	<p>Optional. Enter a number from 1-9999 to define the location on the output record for a 1-character code indicating the presence of a DPV vacant address.</p> <ul style="list-style-type: none"> • Blank — Not presented. • Y — Vacant address. • N — Not vacant address.
DPV PBSA Flag	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-character PBSA flag indicating whether a PBSA was found:</p> <ul style="list-style-type: none"> • Blank — Not presented. • Y — PBSA found. • N — No PBSA found. <p>No default.</p>
RDI Residential Flag	<p>Optional. Location on the output record for the 1-character RDI residential flag listed below:</p> <ul style="list-style-type: none"> • Blank — Not attempted. • R — Yes, this address is a residential-only delivery point.
RDI Business Flag	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the 1-character RDI business flag.</p>

Field Name	Description
Business flag option	<p>Optional. Indicates whether to allow for a mixed return code during RDI processing.</p> <ul style="list-style-type: none"> • Blank — Return B for all Business Delivery Points. • B — Yes, this address is a business-only delivery point. • M — Yes, this address is mixed residential and business delivery point. <p>Note: You can only receive a business flag of M if you have enabled the business flag option under Allow M=Mixed Return Code.</p>
DPV Shut Down	<p>Optional. Indicates whether to stop processing when DPV encounters a false-positive (seed record):</p> <ul style="list-style-type: none"> • S — Shuts down CODE-1 Plus processing when a false-positive (seed record) is encountered. • W — Allows CODE-1 Plus to continue processing to completion of the entire job, generating form 3553. <p>Note: CODE-1 Plus will output to the execution log the seed record information necessary to reactivate the DPV license.</p>

Defining Additional Address Match Locations

Use the Additional Address Match Information Storage screen to define the location and length of additional address matching information to store in your output file. To access the Address Match Information Storage screen:

To access the Additional Address Match Information Storage screen:

1. From the Name/Address Record Posting screen, page down to the Additional Address Match Information Storage screen (C1CPOD120).
2. Use the following table to complete the fields on the Additional Address Match Information Storage screen.

Field Name	Description
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Default Flag-High Rise Default	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the High Rise Default.</p> <ul style="list-style-type: none"> • H — Record matched to a High Rise Default record. • Blank — No match was made. Matched record was not a default record. <p>Default is blank.</p>
Default Flag-Rural Route Default	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the Rural Route Default. One of the following codes is stored:</p> <ul style="list-style-type: none"> • R — Record matched to a Rural Route Default record. • Blank — No match was made. Matched record was not a default record. <p>Default is blank.</p>
Default Flag-Military Default	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the Military Default.</p> <ul style="list-style-type: none"> • M — Record matched to a Military Default record. • Blank — No match was made. Matched record was not a default record. <p>Default is blank.</p>
Unique ZIP Code-City/State Correlation return code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the Unique ZIP Code-City/State Correlation Return Code.</p> <ul style="list-style-type: none"> • U — The original ZIP Code was unique and did not correspond to the input city/state. • Blank — Input ZIP Code was either not unique or was unique and corresponded to the input city/state. <p>Default is blank.</p>
Auxiliary File Match Code	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the Auxiliary File Name Match code. Only one code option:</p> <ul style="list-style-type: none"> • 1 — Early Warning System (EWS) File.

Field Name	Description
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Secondary Component Processing Indicator	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the Secondary Component Processing Indicator.</p> <ul style="list-style-type: none"> • Blank — No multiple secondary component logic used. • E — Exact match. • S — Multiple Secondary Match logic used.
Override City Name Indicator	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the Override City Name indicator. Override City Name refers to the city name for the Preferred Last Line Key (PLL) from the USPS ZIP + 4 File. The Default City Name refers to the city name for the PPL Key on the USPS City/State File.</p> <ul style="list-style-type: none"> • Blank — Default City Name stored. • O — Override City Name stored.
Override City Name Indicator	<p>Optional. Enter a number from 1-9999 to define the location on the output record for the Indicator of Input city type.</p> <ul style="list-style-type: none"> • P — Primary city. • S — Secondary city. • V — Vanity city.
Military Address Indicator	<p>Optional. Enter a number from 1-9999 to define the location of the Indicator of military address:</p> <ul style="list-style-type: none"> • M — Indicates a military address.
Enhanced Street Matching Indicator	<p>Enter a number from 1-9999 to define the location on the output record for the Enhanced Street Matching (ESM) indicator.</p> <ul style="list-style-type: none"> • Blank — No ESM performed. • M — Matched using ESM. • P — ESM performed but no match found.

Field Name	Description
LACSLink Return Code	<p>Optional. Enter a number from 1-9999 to define the location of the LACSLink process success indicator:</p> <ul style="list-style-type: none"> • Blank — No LACS processing occurred. • A — LACS record match. • 00 — No match. • 01 — Found LACS record but ambiguous; multiple addresses were available. • 02 — Found LACS record but new address failed to convert. • 14 — Match found LACS record but wouldnot convert. • 92 — Match with secondary information.
LACSLink Flag	<p>Optional. Enter a number from 1-9999 to define the location of the code that indicates if a table was matched:</p> <ul style="list-style-type: none"> • Blank — No LACS processing occurred. • F — LACS seed violation has occurred. • N — No match occurred or a new address would not convert at runtime. • S — Input address contained both primary and secondary information but match occurred using only primary information. • Y — Full match occurred.
Street Default Indicator	<p>Optional. Enter a number from 1-9999 to define the location for the Street Default flag:</p> <ul style="list-style-type: none"> • Blank — Record matched is not a Street Default record. • S — Record is matched to a Street Default record. <p>No default.</p>

Reformat Output Record Screen

Use the **Reformat Output Record** screen (C1CPMO13) to reformat the pieces of your output records before the record is written to the output file:

1. From the Work With Jobs screen, use F12 to select the job for defining output. The Define/Submit CODE-1 Plus Job screen displays.
2. Select Reformat Output Record.
3. Use the following table to complete the fields on the Reformat Output Record screen (C1CPMO13).

Field Name	Description
Source Field	Required. Enter 3-4 alphanumeric characters to specify the location in the work area of the information to be copied. Optionally, you can enter one of the following codes to copy one of the following types of generic information to the target location: <ul style="list-style-type: none">• SPC — Spaces.• X00 — Binary zeros.• ZRO — Character zeros.• Blank — No default.
Length	Required. Enter a number from 1-999 to specify the length of the information to be copied to the target location. No default.
Target Field	Required. Enter a number from 1-9999 to specify the location in the input array to which you want the source information copied. No default.

7 - Running Jobs

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Component Overview

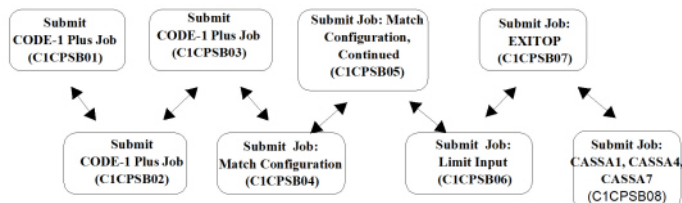
The **Submit Batch Job** component allows you to:

- Limit the number of records processed
- Specify input and output file details
- Identify input or output exit routines
- Test the parameter records
- Set match configurations and global storage options
- Submit the job to run

You will define these items from the following screens:

- **Submit CODE-1 Plus Job** (C1CPSB01)
- **Submit CODE-1 Plus Job** (C1CPSB02)
- **Submit CODE-1 Plus Job** (C1CPSB03)
- **Submit CODE-1 Plus Job: Match Configuration** (C1CPSB04)
- **Submit CODE-1 Plus Job: Match Configuration, Continued** (C1CPSB05)
- **Submit CODE-1 Plus Job: Limit Input** (C1CPSB06)
- **Submit CODE-1 Plus Job: EXITOP** (C1CPSB07)
- **Submit CODE-1 Plus Job: CASSA1, CASSA4, CASSA7** (C1CPSB08)
- *Submit CODE-1 Plus Job: AUXIL1* (C1CPSB09)

The following figure shows the relationship among these screens.



The Submit Job Screens

Files and File Names

CODE-1 Plus has six files that you can identify for your job: one input file and five output files. The program has internal names for each of these files, and these internal names will be printed on the reports and on the FILEDF parameter record, regardless of the actual file, library, and member names. For more information on reports, refer to [Generating Reports](#). For more information on the FILEDF parameter record, refer to “Parameter Reference” in your **CODE-1 Plus Reference Guide**.

You can use the Submit Batch Job component to identify file, library, and member names for the following files:

File	Description
C1BMNAM	This required file is your input name-and-address file.
C1BMCOK	This required file is the output file to which CODE-1 Plus writes all of the records that were verified or corrected.
C1BMZP4	This optional file is the output file to which CODE-1 Plus writes all of the records that were successfully ZIP + 4 coded. Note that this file is a subset of the C1BMCOK file.
C1BMNCO	This optional file is the output file to which CODE-1 Plus writes all of the records that had valid input ZIP Codes (i.e., the ZIP Code was valid somewhere in U.S.) but were not matched for some reason. If you do not identify this file, these records will be written to the C1BMCOK file along with the records that were successfully matched.
C1BMIZP	This optional file is the output file to which CODE-1 Plus writes all of the records that had invalid input ZIP Codes. An invalid input ZIP Code is one that is not valid anywhere in the United States. If you do not identify this file, these records will be written to the C1BMNCO file (if it is identified) or the C1BMCOK file (if the C1BMNCO file is not identified).

File	Description
C1BMSTA	This optional file is the output file to which CODE-1 Plus writes all of the output statistics. These records are fixed length.

Exit Routines

The Submit Batch Job component allows you to specify the:

- Input exit routine that CODE-1 Plus should call each time it is ready to read a record from your input name-and-address file.

and

- Output exit routines that CODE-1 Plus should call each time it is ready to write a record to one of your output files.

If you are using an input exit routine, instead of reading the record, CODE-1 Plus calls your exit routine and waits for the exit routine to pass a record back. If you are using an output exit routine, instead of writing the record to the file, CODE-1 Plus passes the record to the output exit routine.

For example, you might have an input exit routine named CODEIT that adds a special code to a record. If you want to add that code to each record before the record is passed to CODE-1 Plus, you specify CODEIT as the name of the exit routine. Then, every time CODE-1 Plus is ready to accept a record, it passes control to CODEIT, which reads the record, adds the code to the record, and then passes the record to CODE-1 Plus so that CODE-1 Plus may process that record.

When you indicate that CODE-1 Plus should call an exit routine, it will call that exit routine with the following four parameters in the linkage section at each I/O request:

- PARM1: This parameter is a total of 9 bytes, and has two components, as follows:
 - Bytes 1-8: The file name (C1BMNAM, C1BMCOK, C1BMNCO, C1BMIZP, or C1BMZP4).
 - Byte 9: Function indicator. This byte will contain one of the following codes to tell your program what type of processing to perform:
 - O — Open the input or output file.
 - R — Read a record from the input file.
 - W — Write a record to the output file.

- C — Close the input or output file.
- PARM2: This parameter is 4-digits long and packed into a 3-byte field (COBOL “PIC S9(5) COMP-3”). This parameter must be filled in by your exit routine if byte 9 of PARM1 is O or R. When byte 9 of PARM1 is R, the input exit routine signals the end of the file by setting this to 0.
- PARM3: This parameter contains the output record to be passed from CODE-1 Plus to your program (when EXITFC is W), or the input record to be passed from your program to CODE-1 Plus (when EXITFC is R). The length of this parameter will be the length specified by the exit routine in PARM2 (maximum of 9999).
- PARM4: This parameter contains the image of your FILEDF parameter record, and is 80 bytes in length.

Limiting the Number of Records Processed

There are five ways to limit the number of records CODE-1 Plus processes:

1. Restrict processing to records with ZIP Codes that fall in a particular range
2. Skip a portion of the file before any records are selected
3. Type a cross-sectional sampling number to select a portion of the records, evenly spaced throughout the file
4. Specify a maximum number of records to be processed; in this case, CODE-1 Plus will start at the beginning of the file and process every record until the maximum number is reached
5. Specify a fraction of records to process or ignore.

You may use these fields in conjunction with each other. For example, you can type a number of records to skip, and a maximum number of records to read, if you wanted to process the middle of the file, but not the beginning or the end.

Restricting the ZIP Code Range

If you choose to restrict processing to only those records within a given ZIP Code range, type a low ZIP Code and a high ZIP Code. Note that CODE-1 Plus assumes that your input file is sorted by ZIP Code. For this reason, if CODE-1 Plus encounters a record with a ZIP Code that is alphanumerically lower than the low ZIP Code you typed, that record will not be processed, and CODE-1 Plus will proceed to the next record. If, however, CODE-1 Plus encounters a record with a ZIP Code

alphanumerically higher than your specified high ZIP Code, it will assume that all of the remaining records also have higher ZIP Codes, and CODE-1 Plus will treat the record as the end of the file.

Decimal Fraction

The Decimal Fraction feature allows you to sample records throughout the file, from beginning to end, without processing sequential records. To determine the number to type in this 7-byte field, divide the number of records you want to process by the number of records in the file. This will give you a decimal number. Drop the decimal, and type the first 7 digits of the number. For example, you have a file with 102986 records, and you want to process 2000 records. You would divide 2000 by 102986 and get .0194201153. Dropping the decimal, you would type 0194201 in the Decimal Fraction field. This will ensure that the 2000 records processed are evenly distributed throughout the file.

Function Keys

Function Keys

The following function keys are available on the Submit Batch Job screens

Function Key	Name	Description
F3	Exit	Return to the Define/Submit CODE-1 Plus Job screen (C1CPDS02) without submitting this job.
F6	Submit	Submit this job and return to the Define/Submit CODE-1 Plus Job screen.
F7	Parm test	Submit this job to only test the parameter records that have been generated for this job.

Function Key	Name	Description
F8	Run BUILD Report	Submit the Build Report job.

Submit CODE-1 Plus Job Screen (C1CPSB01)

The first Submit CODE-1 Plus Job screen, shown below, allows you to specify the input name-and-address file to use for the job. To access this screen, choose the **Submit Batch Job** function from the **Define/Submit CODE-1 Plus Job** screen (C1CPDS02), or choose to submit a job from the Work with Jobs screen (C1CPMM03).

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY      My Sample Job                             C1CPSB01
                  Submit CODE-1 Plus Job                   RXX.XM00

Specify Job details:
[C1BMNAM] Input N/A file . . . . . GLIVPC1
Library . . . . . GLIVP
Member . . . . . *FIRST
Exit Routine . . . . .

Job description . . . . . QDETJOBD
Library . . . . . QGPL
Job name . . . . . @@IVP80001

Hold on job queue? . . . . . N Y, N

[PGMNAM] Select Address Matcher memory model . . . . . Blank,S,M,L,H
Use RDI Large Memory Module (DPV040L)? . . . . . Y, N
[DB LIB] CODE-1 Plus Database Library . . . . . C1PJUL14
[BYPEXP] Override an expired CODE-1 Plus database? . . . . . Y, N

More...

F3=Exit  F6=Submit  F7=Parm Test  F8=Run BUILD Report

```

Field Name	Format	Description	Comments
Input N/A file	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the file that contains your input name-and-address file.	Required if you do not use an exit routine. Default is the file name you specified on the Create New Job screen (C1CPNJ01).

Field Name	Format	Description	Comments
Library (Input N/A file)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the library that holds the input name-and-address file.	Required if you don't use an exit routine.Default is the library name you specified on the Create New Job screen (C1CPNJ01).
Member	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The member of the file that holds your input name-and-addresses.	Required if you don't use an exit routine.Default is the member name you specified on the Create New Job screen (C1CPNJ01).
Exit Routine	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the input exit routine that should be used to pass records to CODE-1 Plus.	Required if you don't type an Input N/A File.
Job description	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the file that contains job processing details that should be used for this job.	Required.Default is the job description you specified on the Create New Job screen (C1CPNJ01).
Library (Job description)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the library that holds the job description named above.	Required. Default is the library name you specified on the Create New Job screen (C1CPNJ01).
Job name	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The unique name of this job as it is defined in the system.	Required.Default is a combination of the job ID and the sequence number based on the number of times the job has been submitted.

Field Name	Format	Description	Comments
Hold on job queue	Y or N	<p>A code indicating whether or not this job should be held on the job queue to be released at a later time. Type one of the following codes:</p> <p>Y Yes, hold the job on the job queue.</p> <p>N No, submit the job immediately.</p>	Required.Default is N.
Select Address Matcher memory model	Blank, S, M, L, or H	<p>You can choose the program with a memory model appropriate for your site. Enter one of the following program names (memory models):</p> <p>Blank Default memory model (3 MB).</p> <p>S Small memory model (1 MB).</p> <p>M Medium memory model (6 MB).</p> <p>L Large memory model (12 MB).</p> <p>H Huge memory model (28 MB).</p>	Required.Default is blank.
Use RDI Large Memory Module (DPV040L)?	Y or N	<p>If you have the RDI option, you can select whether or not you want to use the RDI Large Memory Module for your RDI processing:</p> <p>Y Use the RDI Large Memory Module.</p> <p>N Do not use the RDI Large Memory Module.</p>	Required if you have the RDI option.Default is N.

Field Name	Format	Description	Comments
CODE-1 Plus Database Library	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the library that holds the CODE-1 Plus postal database against which the records are to be matched.	Required.Defaults to the library that was specified during your CODE-1 Plus installation.
Override an expiredCODE-1 Plus database?	Y or N	<p>Select whether or not you would like to bypass an expired CODE-1 Plus database.</p> <p>Y Yes, bypass the expired database.</p> <p>N No, do not bypass the expired database.</p> <p>NOTE: It is very important to use a current CODE-1 Plus database. This option is provided for use in an emergency situation only and should not be used in "normal" processing.</p>	Required.

Submit CODE-1 Plus Job Screen 2 (C1CPSB02)

The second **Submit CODE-1 Plus Job** screen allows you to type the file names, libraries, and member names of your coded records output file(s). To access this screen, page down from the first **Submit CODE-1 Plus Job** screen (C1CPSB01).

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System  C1CPSB00
MM/DD/YYYY          My Sample Job                        C1CPSB02
Job TUTOR          Submit CODE-1 Plus Job                RXX.XM00

Select Address Matching output files:
Override output file record length . . . . .

[C1BMCOK] Successfully Coded output file . . . . . C1NAMTST1
Library . . . . . GLIWP
Member . . . . . CODED
Exit Routine . . . . .
Req'd Reclen: Existing File Reclen: Delete Existing File?

[C1BMZP4] Produce Coded ZIP+4 output file? N . . . . C1NAMTST1
Library . . . . . GLIWP
Member . . . . . ZIP4
Exit Routine . . . . .
Req'd Reclen: Existing File Reclen: Delete Existing File?

More...

F3=Exit  F6=Submit  F7=Parm Test  F8=Run BUILD Report

```

Field Name	Format	Description	Comments
Override Output File Record Length	Number from 1-9999	Enter a number from 1-9999 to override the calculated required record length.	Default is the calculated output file record length.
Successfully Coded output file	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the output file to which the records that were successfully matched should be written.	Required if you don't use an exit routine.Default is "C1NAMjobid"
Library (Successfully Coded output file)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the library that holds the Successfully Coded output file.	Required if you don't use an exit routine.Defaults to the "Library for Job Objects" specified at job creation.
Member (Successfully Coded output file)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The member of the file that holds the Successfully Coded output file.	Required if you don't use an exit routine.Default is "CODED"
Exit Routine (Successfully Coded output file)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the output exit routine to which your successfully coded records should be passed.	Required if you don't type a name in the Successfully Coded output file field.

Field Name	Format	Description	Comments
Req'd Reclen (Successfully Coded output file)	Number from 1-9999	Displays the required length of the Successfully Coded output file. The value displayed here is based on the output field lengths that you defined for the job.	Display only. Does not accept entry.
Existing File Reclen (Successfully Coded output file)	Number from 1-9999	This field displays the actual record length of the Successfully Coded output file.	Display only. Does not accept entry.
Delete Existing File? (Successfully Coded output file)	Y or N	<p>If the required length (Req'd Reclen) is not equal to the actual length (Existing File Reclen), specify the action to take:</p> <p>Y Delete the output file. If the Req'd Reclen value is not equal to the Existing File Reclen value, this field defaults to Y.</p> <p>N Do not delete this file. Default is N.</p> <p>Note: If the Req'd Reclen value is not equal to the Existing File Reclen value and you specify N for this field, your job will fail.</p>	Optional.Default is N .
Produce Coded ZIP + 4 output file (indicator)	Y or N	<p>A 1-byte code indicating if any records are to be written to this file. Type one of the following:</p> <p>Y Yes, write all records successfully ZIP + 4 coded to this output file.</p> <p>N No, write all records successfully ZIP + 4coded only to the Successfully Coded output file.</p>	Required.Default is N .

Field Name	Format	Description	Comments
Produce Coded ZIP + 4 output file (name)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the output file to which the records that were successfully ZIP + 4 coded should be written.	Required if you don't use an exit routine.Default is "C1NAMjobid"
Library (Coded ZIP + 4 output file)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the library that holds the Coded ZIP + 4 output file.	Required if you don't use an exit routine.Defaults to the "Library for Job Objects" specified at job creation.
Member (Coded ZIP + 4 output file)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The member of the file that holds the Coded ZIP + 4 output file.	Required if you don't use an exit routine.Default is "ZIP4."
Exit Routine (Coded ZIP + 4 output file)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the output exit routine to which your ZIP + 4 coded records should be passed.	Required if you don't type a name in the Coded ZIP + 4 output file field.
Req'd Reclen (Coded ZIP + 4 output file)	Number from 1-9999	Displays the required length of the Coded ZIP + 4 output file. The value displayed here is based on the output field lengths that you defined for the job.	Display only. Does not accept entry.
Existing File Reclen (Coded ZIP + 4 output file)	Number from 1-9999	This field displays the actual record length of the Coded ZIP + 4 output file if the file already exists.	Display only. Does not accept entry.

Field Name	Format	Description	Comments
Delete Existing File? (Coded ZIP + 4 output file)	Y or N	<p>If the required length (Req'd Reclen) is not equal to the actual length (Existing File Reclen), specify the action to take:</p> <p>Y Delete the output file. If the Req'd Reclen value is not equal to the Existing File Reclen value, this field defaults to Y.</p> <p>N Do not delete this file. Default is N.</p> <p>Note: If the Req'd Reclen value is not equal to the Existing File Reclen value and you specify N for this field, your job will fail.</p>	Optional. Default is N .

Submit CODE-1 Plus Job Screen 3 (C1CPSB03)

The third **Submit CODE-1 Plus Job** screen allows you to type the file names, libraries, and member names of your uncoded records output file(s). To access this screen, page down from the second Submit CODE-1 Plus Job screen (C1CPSB02).

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY          My Sample Job                            C1CPSB03
[Job]                Submit CODE-1 Plus Job                    RXX.XM00

Select Address Matching output files:
[C1BMZIP] Produce Invalid-ZIP output file? N . . . . C1NAMTST1
Library . . . . . GLIWP
Member . . . . . INVZIP
Exit Routine . . . . .
Req'd Reclen:      Existing File Reclen:      Delete Existing File?

[C1BMNCO] Produce Uncoded output file? . . N . . . . C1NAMTST1
Library . . . . . GLIWP
Member . . . . . UNCODED
Exit Routine . . . . .
Req'd Reclen:      Existing File Reclen:      Delete Existing File?

[C1BMSTA] Produce Statistics output file?. N . . . . C1STATST1
Library . . . . . GLIWP
Member . . . . . STATE
Req'd Reclen:      Existing File Reclen:      Delete Existing File?
More...

F3=Exit F6=Submit F7=Parm Test F8=Run BUILD Report

```

Field Name	Format	Description	Comments
Produce Invalid-ZIP Code output file (indicator)	Y or N	<p>A 1-byte code indicating if any records are to be written to this file. Type one of the following:</p> <p>Y Yes, write all records with invalid input ZIP Codes to the Invalid-ZIP Code output file.</p> <p>N No, write all records with invalid input ZIP Codes to the Uncoded output file (if one is define) or the Successfully Coded output file (if no Uncoded Records File is defined).</p>	Required. Default is N.
Invalid-ZIP Code Output File (name)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the output file to which the records with invalid input ZIP Codes should be written.	Optional. Default is "C1NAMjobid."
Library (Invalid-ZIP Code Output File)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the library that holds the Invalid-ZIP Code Output File.	Required if you indicated that this file is to be created, and you don't use an exit routine. Defaults to the "Library for Job Objects" specified at job creation.
Member (Invalid-ZIP Code Output File)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The member of the file that holds the Invalid-ZIP Code Output File.	Required if you indicated that this file is to be created, and you don't use an exit routine. Default is "INVZIP."
Exit Routine (Invalid-ZIP Code Output File)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the output exit routine to which the records with invalid input ZIP Codes should be passed.	Required if you indicated that this file is to be created, and you didn't type an Invalid-ZIP Output File name.

Field Name	Format	Description	Comments
Req'd Reclen (Invalid-ZIP Code Output File)	Number from 1-9999	Displays the required length of the Invalid-ZIP Code output file. The value displayed here is based on the output field lengths that you defined for the job.	Display only. Does not accept entry.
Existing File Reclen (Invalid-ZIP Code Output File)	Number from 1-9999	This field displays the actual record length of the Invalid-ZIP Code output file if the file already exists.	Display only. Does not accept entry.
Delete Existing File? (Invalid-ZIP Code Output File)	Y or N	<p>If the required length (Req'd Reclen) is not equal to the actual length (Existing File Reclen), specify the action to take:</p> <p>Y Delete the output file. If the Req'd Reclen value is not equal to the Existing File Reclen value, this field defaults to Y.</p> <p>N Do not delete this file. Default is N.</p> <p>Note: If the Req'd Reclen value is not equal to the Existing File Reclen value and you specify N for this field, your job will fail.</p>	Optional.Default is N .
Produce Uncoded Output File (indicator)	Y or N	<p>A 1-byte code indicating if any records are to be written to this file. Type one of the following:</p> <p>Y Yes, write all records that could not be matched to this file.</p> <p>N No, write all records that could not be matched to the Successfully Coded output file.</p>	Optional.Default is N .

Field Name	Format	Description	Comments
Uncoded Output File (name)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the output file to which the records that could not be matched should be written.	Required if you don't use an exit routine and you select "Y" to produce an uncoded file. Default is "C1NAMjobid."
Library (Uncoded Output File)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the library that holds the Uncoded Records output file.	Required if you don't use an exit routine. Defaults to the "Library for Job Objects" specified at job creation.
Member (Uncoded Output File)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The member of the file that holds the Uncoded Records output file.	Required if you don't use an exit routine. Default is "UNCODED."
Exit Routine (Uncoded Output File)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the output exit routine to which your uncoded records should be passed.	Required if you indicated that this file is to be created, and you didn't type an Uncoded Records File name.
Req'd Reclen (Uncoded Output File)	Number from 1-9999	Displays the required length of the Uncoded output file. The value displayed here is based on the output field lengths that you defined for the job.	Display only. Does not accept entry.
Existing File Reclen (Uncoded Output File)	Number from 1-9999	This field displays the actual record length of the Uncoded output file if the file already exists.	Display only. Does not accept entry.

Field Name	Format	Description	Comments
Delete Existing File? (Uncoded Output File)	Y or N	<p>If the required length (Req'd Reclen) is not equal to the actual length (Existing File Reclen), specify the action to take:</p> <p>Y Delete the output file. If the Req'd Reclen value is not equal to the Existing File Reclen value, this field defaults to Y.</p> <p>N Do not delete this file. Default is N.</p> <p>Note: If the Req'd Reclen value is not equal to the Existing File Reclen value and you specify N for this field, your job will fail.</p>	Optional.Default is N .
Produce Statistics Output File? (indicator)	Y or N	<p>A 1-byte code indicating if the Output Statistics file should be produced. Type one of the following:</p> <p>Y Yes, produce this file.</p> <p>N No, do not produce file.</p>	Optional.Default is N.
Library (Statistics Output File)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The name of the library that holds the Output Statistics file.	Required if you don't use an exit routine.Defaults to the "Library for Job Objects" specified at job creation.
Member (Statistics Output File)	1 to 10 characters (A-Z, 0-9, \$, @, or #). First character must not be 0-9.	The member of the file that holds the Output Statistics file.	Required if you don't use an exit routine.Default is "STATS."

Field Name	Format	Description	Comments
Req'd Reclen (Statistics Output File)	Number from 1-9999	Displays the required length of the Statistics output file. The value displayed here is based on the output field lengths that you defined for the job.	Display only. Does not accept entry.
Existing File Reclen (Statistics Output File)	Number from 1-9999	This field displays the actual record length of the Statistics output file if the file already exists.	Display only. Does not accept entry.
Delete Existing File? (Statistics Output File)	Y or N	<p>If the required length (Req'd Reclen) is not equal to the actual length (Existing File Reclen), specify the action to take:</p> <p>Y Delete the output file. If the Req'd Reclen value is not equal to the Existing File Reclen value, this field defaults to Y.</p> <p>N Do not delete this file. Default is N.</p> <p>Note: If the Req'd Reclen value is not equal to the Existing File Reclen value and you specify N for this field, your job will fail.</p>	Optional. Default is N .

Submit CODE-1 Plus Job Screen 4 (C1CPSB04)

The fourth **Submit CODE-1 Plus Job** screen is the Match Configuration screen. Use this screen to specify the degree of closeness compared elements must have for CODE-1 Plus to determine an address match. You can also indicate other storage options for multiple matches and probability of

correctness that apply globally to all elements of a match. To access this screen, page down from the third **Submit CODE-1 Plus Job** Screen.

Note: The match configuration values have to be specified each time a job is submitted. These values are not saved.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY          My Sample Job                             C1CPSB04
[JOB]              Submit CODE-1 Plus Job                     RXX.XM00

[CONFIG] Specify Match Configuration elements, if desired:
Street Name Match Code . . . . . E = Equal, T=Tight,
Firm Name Match Code . . . . . M = Medium (default)
Directional/Suffix Match Code . . . . . L=Loose

Return Vanity City Name when best match? . . . . . N, Y (default N)
Accept Multiple Matches? . . . . . N, Y (default N)
Dual Address Match Logic . . . . . N, S, P (default N)
N = Normal, S = Return Street match, P = Return PO Box match
Output Case Option . . . . . Blank, C, L
Blank = Uppercase, C = Mixed Case, L = Lowercase

Return ZIP when not correlated to city/st? . . . . . N, Y (default N)
Store non-standard PMB numbers? . . . . . N, Y (default N)
Max Address Correctness for storage . . . . . 0-9 (default 9)
Max Overall Correctness for storage . . . . . 0-9 (default 9)
User-controlled CASS Configuration suffix . . . . . 00-99
Terminate If Non-CASS Certified? . . . . . N, Y (default N) More..

F3=Exit  F6=Submit  F7=Parm Test  F8=Run BUILD Report

```

Note: The storage options for multiple matches and probability of correctness defined this screen override the individual storage setting for the 5-digit ZIP Code, carrier route code, ZIP + 4 Code, standardized address, and city/state.

Field Name	Format	Description	Comments
Street Name Comparison	E, L, M, or T	<p>Controls the tolerance with which CODE-1 Plus determines matches for input street names:</p> <p>E Only exact equal matches are accepted.</p> <p>L The margin of error accepted is somewhat relaxed to allow marginal addresses to match.</p> <p>M The margin of error accepted is adequate to allow most reasonable addresses to match.</p> <p>T The margin of error accepted is more demanding so that the address matches need to be close to equal.</p>	Optional.Default is M.

Field Name	Format	Description	Comments
Firm Name Comparison	E, L, M, or T	<p>Controls the tolerance with which CODE-1 Plus determines matches for input firm names:</p> <p>E Only exact equal matches are accepted.</p> <p>L The margin of error accepted is somewhat relaxed to allow marginal addresses to match.</p> <p>M The margin of error accepted is adequate to allow most reasonable addresses to match.</p> <p>T The margin of error accepted is more demanding so that the address matches need to be close to equal.</p>	Optional.Default is M.
Directional/Suffix Comparison	E, L, M, or T	<p>Controls the tolerance with which CODE-1 Plus determines matches for input directionals and suffixes:</p> <p>E Only exact equal matches are accepted.</p> <p>L The margin of error accepted is somewhat relaxed to allow marginal addresses to match.</p> <p>M The margin of error accepted is adequate to allow most reasonable addresses to match.</p> <p>T The margin of error accepted is more demanding so that the address matches need to be close to equal.</p>	Optional.Default is M.

Field Name	Format	Description	Comments
Return a Vanity City Name	Y or N	<p>Indicates whether or not CODE-1 Plus should return vanity-type city names when they are encountered in the input:</p> <p>Y Yes, store vanity city names.</p> <p>N No, do not store vanity city names.</p>	Optional.Default is N.
Accept Multiple Matches	Y or N	<p>Specifies whether to accept multiple matches:</p> <p>Y Yes, store multiple matches.</p> <p>N No, do not store multiple matches.</p> <p>If "Y", this value overrides individual storage settings for the 5-digit ZIP Code, carrier route code, ZIP + 4 Code, standardized address, and city/state.</p> <p>Note:</p> <p>A Y in this position will result in a non-CASS certified configuration. No CASS report will be generated.</p>	Optional.Default is N.

Field Name	Format	Description	Comments
Dual Address Match Logic	blank, S, or P	<p>Indicates how to handle addresses with multiple non-blank address lines or multiple address types on the same address line:</p> <p>Blank Normal match scoring for street address elements, input ZIP Code, matching address line, and so on.</p> <p>S Return a street match, regardless of the address line.</p> <p>P Return a PO Box match, regardless of the address line.</p> <p>Note:</p> <p>Under normal conditions, a PO Box cannot match if the city name and input ZIP Code are both changed.</p> <p>Note:</p> <p>If S or P is selected, a non-CASS-certified configuration will be generated.</p> <p>DMM 708 states to match to a PO Box first when on the same address line or the PO Box address is the primary address line.</p>	Optional. Default is blank.

Field Name	Format	Description	Comments
Mixed Case Option	blank, C, or L	<p>Indicating whether to return mixed case in all address components:</p> <p>Blank Matched output will be returned in all uppercase.</p> <p>C All address components that contain text will be returned in mixed case.</p> <p>L All address components that contain text will be returned in lower case.</p>	Optional.Default is blank.
Return ZIP Code when not correlated to city/state	Y or N	<p>Indicating whether the Input ZIP Code should be returned when there is no correlation between the input city/state and ZIP Code:</p> <p>Y Store the Input ZIP Code.</p> <p>N Do NOT store the Input ZIP Code.</p> <p>Note: If Y is chosen, a non-CASS certified configuration is created. No PS Form 3553 will be generated.</p>	Optional.Default is N.
Store non-standard PMB numbers	Y or N	<p>Indicates whether to store non-standard private mailbox numbers:</p> <p>Y Store ALL private mailbox numbers.</p> <p>N Store ONLY standard private mailbox numbers.</p> <p>Note:</p> <p>If Y is chosen, a non-CASS certified configuration will be created. No USPS Form 3553 is generated.</p>	Optional.Default is N.

Field Name	Format	Description	Comments
Max Address Correctness for storage	1 numeric character	<p>A one character code indicating the (relative) probable correctness of the address match:</p> <p>0 The address is most likely to be correct.</p> <p>1-8 Intermediate values.</p> <p>9 The address is least likely to be correct.</p> <p>The value typed here overrides the individual Maximum Address Correctness storage settings for the 5-digit ZIP Code, carrier route code, ZIP + 4 Code, standardized address, and city/state.</p>	Optional.Default is 9.
Maximum Overall Correctness for storage	1 numeric character	<p>A one character code indicating the (relative) probable correctness of the overall match:</p> <p>0 The match is most likely to be correct.</p> <p>1-8 Intermediate values.</p> <p>9 The overall match is least likely to correct.</p> <p>The value typed here overrides individual Maximum Overall Correctness storage settings for the 5-digit ZIP Code, carrier route code, ZIP + 4 Code, standardized address, and city/state.</p>	Optional.Default is 9.
User-controlled CASS Configuration suffix	1 or 2 numeric characters	<p>Specifies a configuration number (00-99) to be used when a "Configuration ID" for the Postal Form 3553 cannot be determined. The configuration number typed here will be appended to a "Z" for use.</p>	Optional.No Default.

Field Name	Format	Description	Comments
Terminate If Non-CASS Certified	Y or N	<p>An option indicating whether to continue processing a job if the job is not CASS certified.</p> <p>Y Continue running the job.</p> <p>N Do not continue running the job.</p>	Default is N.

Submit CODE-1 Plus Job Screen 5 (C1CPSB05)

The fifth **Submit CODE-1 Plus Job** screen allows you to continue match configuration. On this screen you can attempt Enhanced Highrise Alternate matching and Multiple Secondary Component processing. Additionally, you may start an Execution Log Counter, use enhanced street matching, and limit your address match to a certain ZIP Code locality. To access this screen, page down from the fourth **Submit CODE-1 Plus Job** Screen.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY          My Sample Job                             C1CPSB05
[Job]              Submit CODE-1 Plus Job                     RXX.XM00

[CONFIG] Specify Match Configuration elements, if desired:
Enhanced Highrise Alternate Matching . . . . . Y, N
Y=Attempt match to the base record when an alternate match is made and the
  input address contains secondary address information
N=Do not attempt to match to the base record

Multiple Secondary Component Processing. . . . . Y, N
Y=Attempt exact secondary match
N=Assign default ZIP+4 code

Execution Log Counter . . . . . x/1000
Use Enhanced Street Matching? . . . . . S, A or Blank
Limit Address Match to ZIP Locality? . . . . . Y, N
Split Indicia Processing? . . . . . Y, N
Write to NCO file if ZIP+4 is 0000 or 9999 . . . . . N or Blank
Append C/O Data Flag . . . . . Y or Blank

More...

F3=Exit  F6=Submit  F7=Parm Test  F8=Run BUILD Report

```

Field Name	Format	Description	Comments
Enhanced Highrise Alternate Matching	Y or N	<p>Enhanced High Rise Alternate Matching allows you to convert a building name used as a street address to the correct, USPS-preferred address street name associated with that building. Select one of the following:</p> <p>Y Yes, attempt to match to the base record when an alternate match is made and the input address contains secondary address information.</p> <p>N No, do not attempt to match to the base record.</p> <p>NOTE: Selecting N will create a Non-CASS-certified configuration.</p>	OptionalDefault is Y.
Multiple Secondary Component Processing	Y or N	<p>Select one of the following options:</p> <p>Y Attempt secondary match.</p> <p>N Assign default ZIP + 4 Code.</p> <p>NOTE: Selecting N will create a Non-CASS-certified configuration.</p>	OptionalDefault is Y.
Execution Log Counter	Numeric(100=100,000)	Number of records (in thousands) to trigger progress reporting in execution log.	Optional.Default is 10,000 (100 for VAX).

Field Name	Format	Description	Comments
Use Enhanced Street Matching?	Blank, A, or S	Controls whether to do enhanced street matching (ESM) or All Street Matching (ASM). Blank Do not use enhanced street matching (default). A Attempt match to all streets in locality (matches to misspelled first letter in street name). S Use enhanced street matching.	Optional.
Limit Address Match to ZIP Code Locality?	Y or N	Select one of the following options: Y Yes, limit address match to ZIP Code locality. N No, do not limit address match to ZIP Code locality.	Optional.
Split Indicia	Y or N	Code indicating whether to perform Split Indicia processing: Y Perform split indicia processing. N Do not perform split indicia processing. NOTE: Setting this option to N will produce a non-CASS-certified configuration. No USPS Form 3553 will be generated.	Optional.Default is Y.
Write to NCO File if ZIP + 4 is 0000 or 9999	N or blank	Indicator that specifies which output file to write the record when ZIP + 4 is zeros or "9999." Blank Write the record to the COK file. N Write the record to the NCO file.	Default is blank.

Submit CODE-1 Plus Job Screen 6 (C1CPSB06)

The sixth **Submit CODE-1 Plus Job** screen allows you to define a portion of the input name-and-address file to process.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY          My Sample Job                            C1CPSB06
[Job]              Submit CODE-1 Plus Job                     RXX.XM00

[HEADER] Restrict input to Range of ZIPs, if desired:
Low ZIP Code . . . . . (records with lower ZIPs will be bypassed)
High ZIP Code . . . . . (record with higher ZIP will be treated as EOF)

[FILEDEF] Skip records at beginning of file, if desired:
Records to skip . .

[FILEDEF] Limit processing to a fraction of the input records, if desired:
Decimal fraction . .

[FILEDEF] Stop processing after a number of records, if desired:
Record Limit . . . .

[NTHSEL] Process Nth number of records, if desired:
NTH number of records to process . . . . .
Include/Exclude option . . . . .
INC = include Nth number of records  EXC = exclude Nth number of records
Fraction of records . . . . . More...

F3=Exit  F6=Submit  F7=Parm Test  F8=Run BUILD Report

```

Field Name	Format	Description	Comments
Low ZIP Code	5 alphanumeric digits	The lowest ZIP Code that should be processed. Records with lower ZIP Codes will be bypassed.	Optional.No default.
High ZIP Code	5 alphanumeric digits	The highest ZIP Code that should be processed. The first record with a higher ZIP Code will be treated as the End of File record.	Optional.No default.
Records to Skip	1 to 7 numeric digits	The number of records that should be ignored at the beginning of the input name-and-address file before any records are processed.	Optional.No default.

Field Name	Format	Description	Comments
Decimal fraction	1 decimal point followed by 1 to 7 numeric digits	A decimal number indicating the portion of the records in the file that should be processed. CODE-1 Plus will multiply this decimal number by the total number of records in the file to obtain the number of records that should be processed. Those records selected for processing will be evenly distributed throughout the input file.	Optional.No default.
Record limit	1 to 7 numeric digits	The maximum total number of records that may be processed for this job.	Optional.No default.

Sampling Method 1 — Including or Excluding Nth Number of Input Records

Nth number of records to process	Numeric digits from 002 to 999.	The nth number of records the you want to either include or exclude from the input records to be read.	Required if you do not use Sampling Method 2.No default.
Include/Exclude Option	INC or EXC	A code indicating whether to include or exclude the specified nth number of input records for processing: INC Include the nth number of input records. EXC Exclude the nth number of input records.	Required if you do not use Sampling Method 2.No default.

Sampling Method 2 — Selecting a Fraction of Input Records

Field Name	Format	Description	Comments
Fraction of Records	A 7-byte numeric digit	A 7-digit positive number specifying the fraction of total input records to process. A decimal point is implied before the first digit.	Required if you do not use Sampling Method 1.No default.

Submit CODE-1 Plus Job Screen 7 (C1CPSB07)

The seventh **Submit CODE-1 Plus Job** screen allows you to specify a user exit routine for CODE-1 Plus to call before writing each record to an output file.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY      My Sample Job                          C1CPSB07
[Job]          Submit CODE-1 Plus Job                    RXX.XM00

[EXITOP] Specify operating exit routine, if desired:

Exit routine name . .      CODE-1 Plus Identifier . .      Blank, P
User-defined data:

      1      1      2      2      3      3      4      4      5      5      6
1...5...0...5...0...5...0...5...0...5...0...5...0...5...0...

More...

F3=Exit  F6=Submit  F7=Parm Test  F8=Run BUILD Report

```

Field Name	Format	Description	Comments
Exit routine name	8 characters	Name of the exit routine that you want CODE-1 Plus to call before writing each record to an output file (or before calling an output exit routine).	Required.No default.

Field Name	Format	Description	Comments
CODE-1 Plus identifier	1 character, blank, or P	If you are going to use this program with the Precisely Barcoding Option, or the Geocoder, you must enter "P" in this position and then use the 2-byte file identifiers as parameter 2.	Optional.
User-defined data	64 characters	Enter any information that you need CODE-1 Plus to pass to your exit routine.	Optional.No default.

Submit CODE-1 Plus Job Screen 8 (C1CPSB08)

The eighth **Submit CODE-1 Plus Job** screen allows you to override CASS certification data.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY          My Sample Job                             C1CPSB08
[Job]              Submit CODE-1 Plus Job                      RXX.XM00

[CASSA1] Override CASS certification data, if desired:
CASS-Certified Company Name . . . . .
CASS-Certified Software Name . . . . .
CASS-Certified Software Version Number . .
Version:   Release:   Modification:

[CASSA4]
Z4CHANGE-Certified Company Name. . . . .
Z4CHANGE-Certified Software Name . . . . .

[CASSA7]
ELOT-Certified Company Name. . . . .
ELOT-Certified Software Name . . . . .

More...

F3=Exit  F6=Submit  F7=Parm Test  F8=Run BUILD Report

```

Field Name	Format	Description	Comments
CASS-Certified Company Name	25 characters	CASS-certified company name as it appears on your CASS certificate (up to 25 bytes).	Optional. You must fill in at least one field. Any field not filled in retains its current value.
CASS-Certified Software Name	30 characters	CASS-certified software name as it appears on your CASS certificate (up to 30 bytes).	
CASS-Certified Software Version Number:		CASS-certified software version number as it appears on your CASS certificate.	
CASS-Certified Software Version:	1 character	CASS-certified software version number.	
CASS-Certified Software Release:	2 characters	CASS-certified release number.	
CASS-Certified Software Modification:	2 characters	CASS-certified modification number.	
Z4CHANGE-Certified Company Name	25 characters	Z4CHANGE-certified company name as it is to appear on your USPS certificate.	These two fields are optional. However, you must fill in at least one field, or an error will occur. Any field not filled in will retain its current Precisely value.
Z4CHANGE-Certified Software Name	34 characters	Z4CHANGE-certified software name as it is to appear on your USPS certificate.	

Field Name	Format	Description	Comments
ELOT-Certified Company Name	25 characters	ELOT-certified company name as is to appear on your USPS certificate.	These two fields are optional. However, you must fill in at least one field, or an error will occur. Any field not filled in will retain its current Precisely value.
ELOT-Certified Software Name	34 characters	ELOT-certified software name as it is to appear on your USPS certificate.	

Submit CODE-1 Plus Job Screen 9 (C1CPSB09)

The ninth **Submit CODE-1 Plus Job** screen allows you to define your Auxiliary File. For more information on Auxiliary File Processing, refer to [Auxiliary File Processing](#).

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY      My Sample Job                          C1CPSB09
[Job]           Submit CODE-1 Plus Job                    RXX.XM00

[AUXIL1] Enter auxiliary reference file information, if desired:

Use Auxiliary reference file?  Y   Y, N
Auxiliary reference file . . . . . G1C1AUX
Library. . . . . C1PAPR02
Member . . . . . G1C1AUX

File Location. . . . . N, C
N=Write to NCO file
C=Write to COK file

Bottom

F3=Exit  F6=Submit  F7=Parm Test  F8=Run BUILD Report

```

Field Name	Format	Description	Comments
Use Auxiliary Reference File?	Y or N	Choose one of the following: Y Yes, you would like to use your Auxiliary Reference File. N No, you would not like to use your Auxiliary Reference File.	Required.Default is Y.

Field Name	Format	Description	Comments
File Location	N or C	<p>Code indicating where to write the auxiliary file in the output:</p> <p>N Write record to the NCO file.</p> <p>C Write record to the COK file.</p>	OptionalDefault is N.

8 - Geographic Coding Definition Screens

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Using the Geographic Coding Definition Screens

This chapter describes the **Geographic Coding Definition** screens that define input and output locations for geographic data. This component is only available if the Geographic Coding Plus software is licensed and installed on your system.

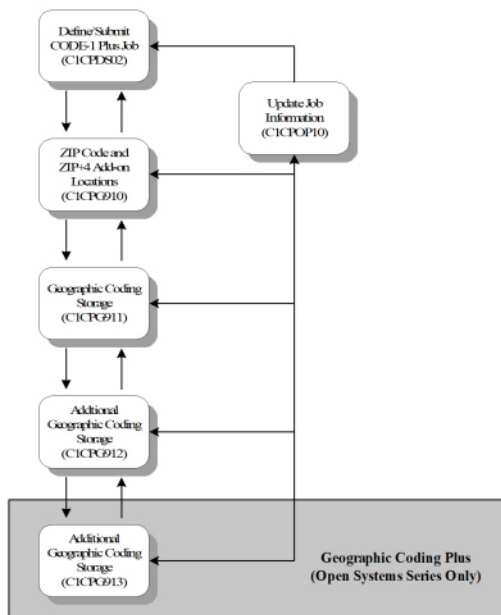
To interface with the Geographic Coding Plus, CODE-1 Plus provides the Geographic Coding Definition screens.

Screen	Description
ZIP Code and ZIP + 4 Add-On Locations screen (C1CPG910)	Defines locations and formats of your ZIP and ZIP + 4 Codes on your output record.
Geographic Coding Storage screen (C1CPG911)	Defines storage locations of match level and census information.
Additional Geographic Coding Storage screen (C1CPG912)	Defines storage locations of USPS state abbreviations, county names, Metropolitan Statistical Area (MSA) information, and latitude/longitude information.

The only input data that the Geographic Coding Plus requires to obtain the geographic match is the ZIP Code. The location of the ZIP Code in your CODE-1 Plus output record is specified in the **ZIP Code and ZIP + 4 Add-on Locations** screen. Optionally, you may provide a ZIP + 4 Code for more precise results. Match result information from a Geographic Coding match attempt will be stored on your CODE-1 Plus output records according to your specification on the Geographic Coding Storage screens.

Note: Geographic Coding is performed after CODE-1 Plus completes output posting.

The following figure shows the relationship between the Geographic Coding screens in CODE-1 Plus.



Geographic Coding Definition Component Overview

Accessing the Geographic Coding Function

You can access the **Geographic Coding Definition** screens from the **Define/Submit CODE-1 Plus Job Menu**. If you have installed Geographic Coding Plus, an additional option, “Geographic Coding Definition,” appears in the Define/Submit CODE-1 Plus Job Menu.

Note: If you have not installed the Geographic Coding Plus, this option does not display.


To define geographic coding information, type the appropriate option number in the Geographic Coding Definition option field of the **Define/Submit CODE-1 Plus Job** screen (option 2 to edit existing information or option 6 to create new geographic coding specifications)

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPDS00
MM/DD/YYYY          MySample Job                             C1CPDS02
[JOB]              Define/Submit CODE-1 Plus Job             RXX.XM00
Type options, press Enter.
2=Edit  6=Create

Opt  Function                                     Last Activity
      Date      Time      User
--  -
--  Defaults for Print Output
--  Reformat Input Record
--  Name/Address File Layout
--  Name/Address Record Posting
--  Reformat Output Record
--  Report Selection
--  Geographic Coding Definition
--  Submit Batch Job
--
F3=Exit  F12=Cancel

```


 This option displays only if the
 Geographic Coding System or Geographic
 Coding Plus is installed.

ZIP Code and ZIP + 4 Add-On Locations Screen (C1CPG910)

The **ZIP Code and ZIP + 4 Add-on Locations** screen asks for information relating to your input ZIP and ZIP + 4 Code locations and formats.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPG900
MM/DD/YYYY          MySample Job                             C1CPG910
[JOB]              Geographic Coding Definition             RXX.XM00
                  ZIP Code and ZIP+4 Add-on Locations

[G9ZIP9] Specify ZIP Code and ZIP+4 Add-on location:
ZIP Code (output from CODE-1 Plus) . . . . . 10  3/5
Format of ZIP Code . . . . . C = Character
                          P = Packed
ZIP+4 Add-on (output from CODE-1 Plus) . . . . . 3/4
Format of ZIP+4 Add-on . . . . . C = Character
                          P = Packed
Rooftop Access Method . . . . . P Blank, M, P, B
blank = None, M = ZIP+4 DB, P = Fields below, B = ZIP+4 DB then fields below
Delivery Point Bar Code (DPBC) . . . . . 120
House Number . . . . . 130  10
More...

F3=Exit  F6=Update

```

Field Name	Format	Description	Comments
ZIP Code: Position on the output record	Number from 1-9999	Specifies where in the CODE-1 Plus output record to extract a ZIP Code to pass on to Geographic Coding Plus. This can be the position of the original ZIP Code or the resulting ZIP Code (from a CODE-1 Plus match) in your output record.	Required if any fields to post are defined.No Default.
Format of ZIP Code	C or P	Indicates one of the following formats for the ZIP Code: C ZIP Code in EBCDIC character format.CODE-1 Plus assumes a field length of 5 bytes. P ZIP Code in packed decimal format. The assumed length of the packed field is 3. The appropriate field length automatically corresponds to the specification typed here.	Required if a ZIP Code position is defined.Default is C.
ZIP + 4 Add-on: Position on the output record	Number from 1-9999	Specifies where in the CODE-1 Plus output record to extract a ZIP + 4 Code to pass on to Geographic Coding Plus. This can be the position of the original ZIP + 4 Code, or the resulting ZIP + 4 (from a CODE-1 Plus match) in your output record.	Optional.No Default.

Field Name	Format	Description	Comments
Format of ZIP + 4 Add-on	C or P	<p>Indicates one of the following formats for the ZIP + 4 Code:</p> <p>C ZIP + 4 Code in EBCDIC character format. CODE-1 Plus assumes a field length of 4 bytes.</p> <p>P ZIP + 4 Code in packed decimal format. The assumed length of the packed field is 3.</p> <p>The appropriate field length automatically corresponds to the specification typed here.</p>	Required if a ZIP + 4 Add-on position is defined. Default is C.
Rooftop Access Method	blank, M, P, or B	<p>The optional Rooftop function adds another level of accuracy to your location and distance calculation by using longitude and latitude coordinates for a particular address. Type one of the following codes:</p> <p>Blank No rooftop access is to be attempted.</p> <p>M Use the DPBC and house number that matched to the ZIP + 4 database to determine the rooftop answer.</p> <p>P Use the input DPBC and house number to determine the rooftop answer.</p> <p>B First, use the DPBC and house number from the ZIP + 4 database match, and then, if there is no ZIP + 4 database match, use the input DPBC and house number to determine the rooftop answer.</p>	Optional. Default is blank.
Location of Delivery Point Bar Code (DPBC)	Number from 1-9999	Location of input DPBC used for Rooftop Matching.	Required if P or B is selected for Rooftop Access Method.

Field Name	Format	Description	Comments
Location for House Number	Number from 1-9999	Location of input House Number used for Rooftop Matching.	Required if P or B is selected for Rooftop Access Method.
Length of House Number	Number from 1-99	Length of input House Number used for Rooftop Matching.	Required if P or B is selected for Rooftop Access Method.

Geographic Coding Storage Screen (C1CPG911)

The Geographic Coding Storage screen specifies the location in your output record to place the match results from the geographic coding attempt.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPG900
MM/DD/YYYY      MySample Job                              C1CPG911
[Job]          Geographic Coding Definition              RXX.XM00
                Geographic Coding Storage

[G9 OUT] Specify storage locations for Census information:

Return Code for level of ZIP Code match. . . . .      Posn  Len
Census GEOCODE . . . . .                               12
(State Code, County Code, Census Tract, and Block Group)
FIPS State Code . . . . .                               2
FIPS County Code . . . . .                             3
Census Tract . . . . .                                 6
Census Block Group . . . . .                           1

More...

F3=Exit  F6=Update

```

Note: Census information can be stored in two ways: you can store the four results for state code, county code, census tract, and census block group as a single 12-byte field or you can define each field's storage position separately. You can use these options alternately or in conjunction with one another.

Field Name	Format	Description	Comments
Return Code for level of ZIP Code match	Number from 1-9999	Instructs CODE-1 Plus to place a level of match return code at that position in the output record. One of the following values will be posted: Blank The input ZIP Code did not match. 9 Both the input ZIP Code and the ZIP + 4 Code matched the Master File. 5 The input ZIP Code matched, but the ZIP + 4 Code did not or was not present. X The Geographic Coding System or Geographic Coding Plus Master File data has expired.	Optional.No Default.
Census GEOCODE	Number from 1-9999	Specifies the output location of the Census GEOCODE. The Census GEOCODE is a 12-byte field comprised of the following 4 fields: 1. State Code 2 bytes 2. County Code 3 bytes 3. Census Tract 6 bytes 4. Block Group 1 byte Total 12 bytes	Optional.No Default.
FIPS State Code	Number from 1-9999	Specifies the location in the CODE-1 Plus output record where you want to store the 2-byte FIPS state code.	Optional.No Default.
FIPS County Code	Number from 1-9999	Specifies the location in the CODE-1 Plus output record where you want to store the 3-byte FIPS county code.	Optional.No Default.

Field Name	Format	Description	Comments
Census Tract	Number from 1-9999	Specifies the location in the CODE-1 Plus output record where you want to store the 6-byte census tract.	Optional.No Default.
Census Block Group	Number from 1-9999	Specifies the location in the CODE-1 Plus output record where you want to store the 1-byte census block group.	Optional.No Default.

Additional Geographic Coding Storage Screen (C1CPG912)

The first Additional Geographic Coding Storage screen defines the location in your CODE-1 Plus output record to place additional match results from a geographic coding attempt.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPG900
MM/DD/YYYY      MySample Job                              C1CPG912
[Job]           Geographic Coding Definition              RXX.XM00
                Additional Geographic Coding Storage

[G9 OUT] Specify storage locations for Geographic Coding information:
                                     Posn  Len
USPS State Abbreviation. . . . .                2
County Name. . . . .                          20
MSA Code (Metropolitan Statistical Area) . . . . .    4
MSA Name . . . . .                            50
Latitude and Longitude Level indicator . . . . .    1
Latitude and Longitude . . . . .                16
Latitude and Longitude Coordinate . . . . .    15 20

More...

F3=Exit  F6=Update

```

Field Name	Format	Description	Comments
USPS State Abbreviation	Number from 1-9999	Location in the output record to store the 2-byte USPS state abbreviation.	Optional.No Default.
County Name	Number from 1-9999	Specifies the location in the output record where you want to store the 20-byte county name.	Optional.No Default.
MSA Code	Number from 1-9999	Location in the output record to store the 4-byte Metropolitan Statistical Area (MSA) code.	Optional.No Default.
MSA Name	Number from 1-9999	Location in the output record to store the 50-byte Metropolitan Statistical Area (MSA) name.	Optional.No Default.
Latitude and LongitudeLevel indicator	Number from 1-9999	<p>Level of latitude and longitude determined for the input ZIP Code. Contains one of the following codes:</p> <p>Z Latitude and longitude represent the area type of the input ZIP Code.</p> <p>T Latitude and longitude represent the population center of the census tract determined for the input ZIP Code/ZIP + 4 Code.</p> <p>B Latitude and longitude represent the population center of the census block group determined for the input ZIP Code/ZIP + 4 Code.</p>	Optional.No Default.

Field Name	Format	Description	Comments
Latitude and Longitude	Number from 1-9999	<p>Location in the output record to store the 16-byte latitude and longitude string.</p> <p>Latitude is a 7-digit number (with four decimal places implied) followed by a 1-byte directional (N or S) and occupies the first 8 bytes of this area.</p> <p>Longitude is a 7-digit number (with four decimal places implied) followed by a 1-byte directional (E or W) and occupies the last 8 bytes of this area.</p>	Optional.No Default.
Latitude and Longitude Coordinate	20 bytes	Latitude/longitude coordinates with 6 degree precision. Coordinate consists of 9 digits, 1 directional, 9 digits, and 1 directional. A 6-digit decimal is implied.	

Additional Geographic Coding Storage Screen (C1CPG913)

The second **Additional Geographic Coding Storage** screen specifies the location in your output record to place match results from a geographic coding attempt.

Note: This screen is available only if you are a Geographic Coding Plus or GeoTAX customer.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPG900
MM/DD/YYYY      MySample Job                              C1CPG913
[Job]          Geographic Coding Definition              RXX.XM00
              Additional Geographic Coding Storage

[G9XOUT] Specify storage locations for Advanced information:  Posn Len
Place Code . . . . . 5
Place Name . . . . . 60
Place Class Code . . . . . 2
Place Class Incorporated/Unincorporated Flag . . . . . 1
MCD/CCD (minor civil division/census civil division) . . . . . 5
Confidence Code . . . . . 4
PRIZM Cluster Code . . . . . 2
PRIZM Cluster Name . . . . . 0
PRIZM Social Group Code . . . . . 2
PRIZM Social Group Name . . . . . 0
Last Annexed Date . . . . . 1 7
Last Updated Date . . . . . 2 7
Last Verified Date . . . . . 3 7
GeoTAX Output Key . . . . . 4 9
GeoTAX Return Code . . . . . 5 1
                                Bottom
F3-Exit  F6-Update

```

Note: The GeoTAX Output Key and the GeoTAX Return Code in the above screen are only available to GeoTAX customers who are also licensed users of the Vertex Quantum or ComTax21 products. Additional information on this subject can be found in the GeoTAX User's Guide.

Field Name	Format	Description	Comments
Place Code	Number from 1-9999	Location in the CODE-1 Plus output record to store the 5-byte FIPS place code returned by GeoTAX.	Optional.No Default.
Place Name	Number from 1-9999	Specifies the location in the output record to store the 60-byte FIPS place name returned by GeoTAX.	Optional.No Default.
Place Class Code	Number from 1-9999	A 5-byte FIPS placed code and 60-byte name returned by GeoTAX.	Optional.No default.

Field Name	Format	Description	Comments
Place Class Incorporated/Unincorporated Flag	Number from 1-9999	<p>A 1-byte code indicating whether a place is incorporated or unincorporated as stored in the U.S. Department of Commerce FIPS Place Code Roster. One of the following codes is stored:</p> <p>Blank Not in the roster.</p> <p>I Incorporated.</p> <p>O Unincorporated.</p> <p>NOTE: This option is available for GeoTAX customers only.</p>	Optional.No default.
MCD/CCD (minor civil division/census county division)	Number from 1-9999	<p>Specifies the location in theCODE-1 Plus output record where you want to store the 5-byte Minor Civil Division/Census County Division (MCD/CCD) returned by Geographic Coding Plus.</p> <p>MCDs Indicates the primary political or administrative divisions of a county representing many kinds of legal entities with a variety of governmental and administrative functions.</p> <p>CCDs Are established in states where there are no legally established MCDs.</p>	Optional.No Default.
Confidence Code	Number from 1-9999	<p>Specifies the location in theCODE-1 Plus output record where you want to store the 3-digit confidence code returned by Geographic Coding Plus.</p> <p>Confidence codes represent a percentage of coverage by a source within a postal geography.</p>	Optional.No Default.

Field Name	Format	Description	Comments
PRIZM Cluster Code	Number from 1-9999	Specifies the location in the CODE-1 Plus output record where you want to store the 2-byte PRIZM cluster code returned by Geographic Coding Plus. PRIZM codes are lifestyle segment codes and definitions allowing for more precise information about the lifestyle and demographic features of a population.	Optional.No Default.
PRIZM Cluster Name	Number from 1-9999	Location in the output record to store the 20-byte PRIZM cluster name returned by Geographic Coding Plus.	Optional.No Default.
PRIZM Social Group Code	Number from 1-9999	Location in the output record to store the 2-byte PRIZM cluster social group code returned by Geographic Coding Plus.	Optional.No Default.
PRIZM Social Group Name	Number from 1-9999	Location in the output record to store the 20-byte PRIZM cluster social group name returned by Geographic Coding Plus.	Optional.No Default.
Last Annexed Date	Number of up to 4 digits	Output location for last annexed date.	
Last Updated Date	Number of up to 4 digits	Output location for last updated date.	
Last Verified Date	Number of up to 4 digits	Output location for last verified date.	

Field Name	Format	Description	Comments
GeoTAX Output Key	Number of up to 4 digits	Output location for GeoTAX output key.	
GeoTAX Return Code	Number of up to 4 digits	Output location for GeoTAX return code: Blank No matching GTMASTR GeoTAX Record found. E Exact match using state/county/place/ZIP Code/place name. P Partial match using state/county/place. A Alternate match using ZIP Code and place name. N Record is default coded based on valid state code.	

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Introduction to Batch Jobs in CODE-1 Plus

In this chapter we will lead you through a basic CODE-1 Plus job using the sample name-and-address file provided with your installation. We will only be covering a few of the options available to you when setting up and running a CODE-1 Plus job. For any basic CODE-1 Plus job, you must:

- Define the contents of your input file
- Specify the layout of your input file
- Define the contents of your output file
- Specify the layout of your output file

On the following pages, we will create a sample job that uses CODE-1 Plus functions to standardize addresses, correct ZIP Codes, and add ZIP + 4 and carrier route codes to input records. This sample job goes beyond what CODE-1 Plus requires for the most basic job and allows you to experiment with a few options.

Finding Your Sample Name and Address File

The input file for this tutorial, C1TUTOR, is included with your installation. Before starting the tutorial, create a “demo” library where you can copy C1TUTOR and store the output files as well.

Analyzing the Job

Before you begin defining your sample job, you need to analyze the following job requirements:

- Sample input file contents and output files
- Sample input file layout
- Output file contents
- Reports to generate
- Headers and footers you want on your reports

Name/Address File Layout

The input file we will use for this job is called C1TUTOR. The following represents the complete input file:

....+...1....+...2....+...3....+...4....+...5....+...6....+...7....+...8....+...9....+...0....+...1....+				
TM129	SAM GERSHWIN PEN ARGYL	MUSICIANS AND OTHERS PA 18072	RT 1 BOX 108	
TM049 NW	DONALD DUCK WASHINGTON	DC 20016	5303 SHERRER PL	
TM059 ST	PEEWEE HERMAN UNIVERSITY PARK	MD 20782	4205 VAN BUREN	
TM019 TER	PETER RABBIT GERMANTOWN	UNITED JUNIOR HIGH MD 20874	9001 LAUREL GROVE	
TM059 AVE APT 205	MINNEY MOUSE GAITHERSBURG	MD 20877	22 S FREDERICK	
TM059 DR	ALAN QUARTERMAIN GAITHERSBURG	GENERAL HOSPITAL MD 20878	240 GOLDKETTLE	
TM019 LN	MASON WILLIAMS GAITHERSBURG	CLASSICAL GASSERS MD 20879	9003 TURTLE DOVE	
TM129	JOHN WILLIAMS COLLEGE PARK	BOSTON POPS MD 20740	3514 DUKE ST	
TM049 CT	JOHN WATSON ANNAPOLIS	MD 21401	216 WINCHESTER	
TM059 DR	ELLEN BERMAN BURKE	VA 22015	9207 SPRUCEWOOD	
TM059 CT	ROBERT E LEE FAIRFAX	LEE HISTORICAL SOCIETY VA 22033	12126 WEDGEWAY	
TM019 REACH RD	BUGS BUNNY CHESAPEAKE	QUEENS COLLEGE VA 23320	1004 WOODSMANS	

TM019 DR APT F	ELMER FUDD NEWPORT NEWS	SCHOOL FOR THE DEAF VA 23606	516 WATERS EDG
TM059	PAM FLANARY HAMPTON	VA 23666	14 BICKFIELD DR
TM049 22	MARTIN FINCH LAUREL	ST BRIDES COLLEGE MD 28989	14231 JIB ST APT
TM129 RD	MARY ELLEN EPPS COLUMBIA	CALVIN COOLIDGE HIGH SC 29209	2516 BANDER HILL
TM059 HWY	WALT DISNEY YORK	SC 29745	6201 CHARLOTTE
TM059 DR	JOHN LENNON NAPLES	JOHN LENNON FAN CLUB FL 33963	10573 GULF SHORES
TM129 ST	JOHN PAUL STUART	ROMAN CATHOLIC SCHOOL BRD FL 34997	2080 SE MADISON
TM019 PK	JIMMY BUFFET NASHVILLE	PIRATES OVER FORTY TN 35589	5525 GRANNY WHITE
TM059 B	BOZ SCAGGS NASHVILLE	TN 37202	BOX 8181 STATION
TM049 VALLEY RD	AL STEWART NASHVILLE	TN 37205	2615 HICKORY
TM059	PETER WHITE NASHVILLE	TN 37207	1443 CELINA DR
TM019 OAKS DR	RANDY HOLMBERG CHATTANOOGA	TN 37412	3922 S MISSION
TM059	YOKO ONO HUDSON	IL 61748	PO BOX 167
TM059 APT 3069	OLIVE OIL AUSTIN	OLIVE GROWERS OF AMERICA TX 78757	1003 JUSTIN LN
TM049	JEB STEWART NEWPORT BEACH	REBELS FOR A CAUSE CA 92661	816 W BALBOA BLVD

TM049	KEN MURRAY SUNNYVALE	ASPENITE CORPORATION CA 94086	770 MAHOGANY LN
TM059	PETER PAN SAN JOSE	NEWFOUNDLAND PUBLIC LIBR CA 95128	2226 BOXWOOD DR
TM129	GEORGE HARRISON CORVALIS	TRAVELING WILBURIES OR 97330	1113 NE BURKE PL
TM059	MICKEY MOUSE APT D102 BELLEVUE	WA 98005	12106 SE 31ST ST
TM059	PAUL MCCARTNEY CLUB DR MILL CREEK	JOHN LENNON FAN CLUB WA 98012	15433 COUNTRY
TM059	PADDY O'NEILL ST PATRICKS MERCY HOME 5055 8TH AVE NE SEATTLE WA 98105		
TM049	ROBERT MONDAVI NE APT 12 SEATTLE	WA 98105	4225 BROOKLYN AVE
TM019	POPEYE T SAILOR SEATTLE	WA 98133	716 N 150TH ST
TM059	RINGO STAR WAY NE SEATTLE	JOHN LENNON FAN CLUB WA 98155	8001 SANDPOINT

This mailing list contains name-and-address records that are laid out as follows:

Position	Data Element
1-5	List Code
9-28	Name
30-54	Secondary Address Line
56-85	Primary Address Line

Position	Data Element
87-106	City Name
108-109	State
111-115	ZIP Code

Output Record Posting Requirements

As stated before, in this tutorial we are going to do the following things:

- Standardize the input addresses
- Correct the original ZIP Codes (if necessary)
- Add ZIP + 4 and carrier route codes to the records
- Store the output records in the same format as the input records, with the ZIP + 4 Code and carrier route code added as follows:

Position	Data Element
116-120	ZIP + 4 Code (stored with preceding hyphen)
122-125	Carrier Route Code

In addition, we want CODE-1 Plus to:

- Store the normalized address (if no match was found).
- Store the individual standardized address elements.
- Store return codes.

In your job, you will tell CODE-1 Plus to store these components as follows:

Position	Data Element
131-181	Address Elements
183-212	Normalized Address Line 1
214-238	Normalized Address Line 2
240-274	Return Codes

Generated Reports

CODE-1 Plus produces four kinds of reports:

- ZIP + 4 Coding
- Carrier Coding
- Line of Travel Coding
- Summary

These reports can be generated by state, list code, or 3-digit ZIP Code. For our sample job, we only want the state reports to print.

When running a job, CODE-1 Plus automatically generates two report files: PRNTXLG and PRNTRPT. These report files contain all of the CODE-1 Plus reports that were created as the result of a job execution:

- PRNTXLG—This report file contains only one report, the Execution Log Report. This report is always printed.
- PRNTRPT—This report file can contain up to 15 different reports. Four reports are output to this file automatically:
 - Parameter Record List Report
 - Control Totals Report
 - Address-Match Execution Statistics Report
 - USPS Form 3553 (This will only be generated for jobs run with a valid CASS configuration)

The following reports are output to this file by default. If you do not want to generate one of these reports, you must tell CODE-1 Plus which reports not to print:

- Analysis of Matched Records Report
- ZIP + 4 Coding by State Report
- Carrier Coding by State Report
- Line of Travel Coding by State Report
- ZIP + 4 Coding by List Code Report
- Carrier Coding by List Code Report
- Line of Travel Coding by List Code Report
- ZIP + 4 Coding by 3-Digit ZIP Report
- Carrier Coding by 3-Digit ZIP Report
- Line of Travel Coding by 3-Digit ZIP Report
- Delivery Point Validation by List Code Report
- Delivery Point Validation Processing Summary Report
- Residential Delivery File Build Report
- Residential Delivery File Execution Log
- Processing Summary by State Report
- Processing Summary by 3-Digit ZIP Code

Note: The National Delivery Index (NDI) Report is not generated by default. To generate the report, you must tell CODE-1 Plus to do so.

Report Headers and Footers

Using the **Defaults for Print Output** component, you define the information you want printed on your reports:

- Headers
- Footers
- Number of lines to print on a page

For this batch job, we will have all reports print at 60 lines per page and the headers and footers will be the following:

Main Header	Secondary Header	Footer
Sample Job	CODE-1 Plus Tutorial	CODE-1 Plus User's Guide

Performance Considerations

In order for your CODE-1 Plus job to run more efficiently, the following steps are recommended:

- Sort your input address file by ZIP Code.
- Use the memory module appropriate for your site capability.

What Will Be Covered in This Tutorial

You will perform the tasks listed below in this tutorial:

1. Create a job.
2. Define the headers and footers of your reports.
3. Define your input and output files.
4. Specify your input name-and-address record layout.
5. Specify your name-and-address record posting requirements.
6. Specify the reports you wish to generate.
7. Submit the job for processing.
8. Read the output.

Submit Batch Job

The Submit Batch component of CODE-1 Plus is where we specify the names of our input and output files. Create a demo library where C1TUTOR and your output files will be sent:

- File C1TUTOR
- Library DEMO
- Member *FIRST.

For this tutorial, we will write output for up to 3 different files—one for successfully matched and coded records, one for records with valid ZIP Codes for which an address match could not be made, and one for records with invalid ZIP Codes. For this example, we will produce three out of the four available output files (we are not printing the ZIP + 4 Coded File).

By default, CODE-1 Plus will assign the following name to the file for successfully coded records:

- File C1NAMTUTOR
- Library DEMO
- Member CODED

CODE-1 Plus will assign the name of the uncoded records file as follows:

- File C1NAMTUTOR
- Library DEMO
- Member UNCODED

Finally, CODE-1 Plus will assign the name of the invalid ZIP Code output file as follows:

- File C1NAMTUTOR
- Library DEMO
- Member INVZIP

The Submit Batch component also allows you several ways to limit processing. For demonstration purposes, we will limit processing to only those records with ZIP Codes between 20000 and 39999.

Creating the Job

Before you do any other steps, you must first create your job. Follow the steps listed below to create a job with the job ID, TUTOR. Start from the Main Menu.

1. Type **5** in the **Option** field to select CODE-1 Plus, and press **Enter**

```

HH:MM:SS      Precisely Application Selection      G1MM01
MM/DD/YYYY      My Sample Job                      G1MM0001
                                                    RXX.XM00

Select one of the following:

1. MailStream Plus Presorting and Reporting System
2. List Conversion System
3. Label Printing System
4. Merge/Purge System
5. CODE-1 Plus Name/Address Coding System
6. Generalized Selection System
7. E2-CASE Casing and Punctuation
8. GEOGRAPHIC CODING Plus
9. I/O-JET Plus
10. Business Merge/Purge Plus
11. GeoTAX
12. VeriMove

60. Canadian Products/International Products

Option: 5

F3=Exit      F10=Command Entry

```

The CODE-1 Plus **Work with Jobs** screen (C1CPMM03) displays.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPMM00
MM/DD/YYYY      My Sample Job                            C1CPMM03
                                                    RXX.XM00
Work with Jobs

Type options, press Enter.
3=Copy      4=Delete  6=Print  7=Rename  12=Work with
16=Submit  99=Release job lock      Position to job _____

Creation      *-- -- -- --Last Activity- -- -- --* Work
OPT  JobID    Date      Date      User      Function      Library

F3=Exit      F5=Refresh      F6=Create      F11=Display Descriptions
F12=Cancel   F19=Reclaim space  F21=Print Summary  F24=More keys

```

2. Press **F6** to create your new job.

You are prompted to type the new job ID. Keep in mind that the job ID typed on this screen cannot already exist in the CODE-1 Plus system.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPMM00
MM/DD/YYYY      My Sample Job                            C1CPMM03
                                                    RXX.XM00
Work with Jobs

New Job ID  TUTOR

Creation      *-- -- -- --Last Activity- -- -- --* Work
OPT  JobID    Date      Date      User      Function      Library

F3=Exit      F5=Refresh      F6=Create      F11=Display Descriptions
F12=Cancel   F19=Reclaim space  F21=Print Summary  F24=More keys

```

3. Type **TUTOR** in the **New Job ID** field, and press **Enter**. The **Create New Job** screen (C1CPNJ01) appears.
4. Fill in the fields as shown below.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPNJ00
MM/DD/YYYY      My Sample Job                             C1CPNJ01
                                      Create New Job          RXX.XM00

Specify Library to hold job objects.

  Library for job objects: DEMO

Provide job details as required:                                Exit Routine

Input N/A file . . . . . C1TUTOR
Library. . . . . DEMO or
Member . . . . . *FIRST

Job description. . . . . QDEFJOB
Library. . . . . QGPL

F3=Exit  F6=Create Job                                         More...

```

Note: In this tutorial, you will be using a work library called DEMO. Either create this library before starting the tutorial, or specify a different library name (one that already exists on your system). If you do not know a valid library to use, see your company's system administrator for help. You cannot specify a Precisely product library.

5. Page down to view the fields on the next screen.

CODE-1 Plus verifies that you have filled in all of the fields correctly. The second **Create New Job** screen (C1CPNJ02) appears. You want to accept all default values on this screen, so you do not have to do anything.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPNJ00
MM/DD/YYYY      My Sample Job                             C1CPNJ02
Job TUTOR      Create New Job          RXX.XM00

Select Address Matching output files.

Successfully coded file. . . . . C1NAMTUTOR
Library. . . . . *LIBWK
Member . . . . . CODED

ZIP+4 coded file . . . . . C1NAMTUTOR
Library. . . . . *LIBWK
Member . . . . . ZIP4

Unsuccessfully coded file. . . . . C1NAMTUTOR
Library. . . . . *LIBWK
Member . . . . . UNCODED

Invalid ZIP(s) file. . . . . C1NAMTUTOR
Library. . . . . *LIBWK
Member . . . . . INVZIP

F3=Exit  F6=Create job                                         Bottom

```

6. Press **F6** to create the new job. The job is created, and the **Define/Submit CODE-1 Plus Job** screen (C1CPDS02) displays. Your job ID displays in the upper left corner, just below the date.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPDS00
MM/DD/YY          My Sample Job                             C1CPDS02
Job TUTOR         Define/Submit CODE-1 Plus Job              RXX.XM00

Type options, press Enter.
  2-Edit  6-Create

Opt  Function
-      Defaults for Print Output
-      Reformat Input Record
-      Name/Address File Layout
-      Name/Address Record Posting
-      Reformat Output Record
-      Report Selection
-      Geographic Coding Definition
-      Submit Batch Job

F3=Exit  F12=PrevScrn

```

You have now finished creating the job.

Defining Your Headers and Footers

Your second task is to define the headers and footers that will print on your reports. Your main header will be “Sample Job” and the current system date (*CURRENT). You will also add an additional header of “CODE-1 Plus Tutorial” and a footer line of “CODE-1 Plus User's Guide.” You want all reports to be printed with 60 lines per page. To do this, follow the steps below:

1. Type **2** in the **Opt** field next to **Defaults for Print Output**, and press **Enter**.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPDS00
MM/DD/YYYY        My Sample Job                             C1CPDS02
Job TUTOR         Define/Submit CODE-1 Plus Job              RXX.XM00

Type options, press Enter.
  2-Edit  6-Create

Opt  Function
  2   Defaults for Print Output
-      Reformat Input Record
-      Name/Address File Layout
-      Name/Address Record Posting
-      Reformat Output Record
-      Report Selection
-      Geographic Coding Definition
-      Submit Batch Job

```

The first **Defaults for Print Output** screen (C1CPPX01) displays.

2. Fill in the fields as shown below.

Note: 60 is the default page size for all reports. You may leave these fields blank if desired.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPPX00
MM/DD/YYYY      My Sample Job                          C1CPPX01
Job TUTOR      Defaults for Print Output                  RXX.XM00

[HEADER] Specify appearance for all reports:

Heading for all Reports. . . . . Sample Job
Date for all Reports . . . . . *CURRENT

[UHDxx/UFTxx] Specify user-defined Headers/Footers, press F11.

[PAGESZ] Override print file page size if required:

Reports (file PRNTRPT) . . . . . 60  25-225 (Default 60)
Execution Log (file PRNTXLG) . . 60  25-225 (Default 60)

F3=Exit  F6=Update  F11=Headers/Footers

```

3. Press **F11** to define the additional header and the footer.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPPX00
MM/DD/YYYY      My Sample Job                          C1CPPX01
Job TUTOR      Defaults for Print Output                  RXX.XM00

[HEADER] Specify appearance for all reports:

Heading for all Reports. . . . . Sample Job
Date for all Reports . . . . . *CURRENT

[UHDxx/UFTxx] Specify user-defined Headers/Footers, press F11.

[PAGESZ] Override print file page size if required:

Reports (file PRNTRPT) . . . . . 60  25-225 (Default 60)
Execution Log (file PRNTXLG) . . 60  25-225 (Default 60)

F3=Exit  F6=Update  F11=Headers/Footers

```

The second **Defaults for Print Output** screen (C1CPPX03) appears.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPPX00
MM/DD/YYYY      My Sample Job                          C1CPPX03
Job TUTOR      Defaults for Print Output                  RXX.XM00

Specify lines to surround all reports:

[UHDxx] Header Lines:
1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...

[UFTxx] Footer Lines:
CODE-1 Plus User's Guide

1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...

F12=PrevScrn  F13=Remove all  F20=Scroll right

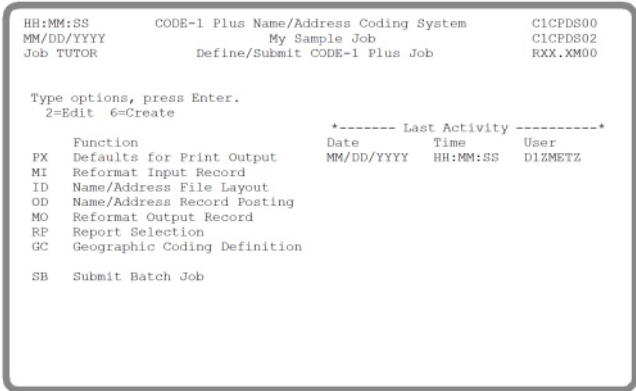
```

4. Fill in the header and footer as shown.
5. Press **F12** to return to the first **Defaults for Print Output** screen.
The first **Defaults for Print Output** screen (C1CPPX01) appears.
6. Press **F6** to save your **Defaults for Print Output** data.

The data is saved, and the C1CPOP10 screen appears, asking whether you want to save your data to an external file.

7. Press **F12**.

The **Define/Submit CODE-1 Plus Job** screen (C1CPDS02) displays.



You have now specified the headers and footer for your print output. Note that under “Last Activity,” the date, time, and user reflects your current date, time, and user ID.

Specifying the Input Name/Address File Layout

In this step of the tutorial, you will specify the layout of your input file. For your sample job you will be defining the following information:

- Street address
- City
- State
- ZIP Code

Remember the format of your input name-and-address file is as follows:

	Position	Data Element
	1-5	List Code

	Position	Data Element
	9-28	Name
Street Address Information	30-54	Secondary Address Line
	56-85	Primary Address Line
	87-106	City Name
	108-109	State
	111-115	ZIP Code

To define your input file, complete the steps on the following pages. Beginning from where we left off, we must first access the **Name/Address File Layout** component from the Define/Submit CODE-1 Plus Job screen.

1. Type **2** in the **Opt** field next to **Name/Address File Layout**, and press **Enter**.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPDS00
MM/DD/YYYY      My Sample Job                          C1CPDS02
Job Tutor      Define/Submit CODE-1 Plus Job            RXX.XM00

Type options, press Enter.
2=Edit  6=Create

*----- Last Activity -----*
Date      Time      User
PX  Defaults for Print Output  MM/DD/YYYY  HH:MM:SS  D1ZMETZ
MI  Reformat Input Record     MM/DD/YYYY  HH:MM:SS  D1ZMETZ
ID 2 Name/Address File Layout  MM/DD/YYYY  HH:MM:SS  D1ZMETZ
OD  Name/Address Record Posting MM/DD/YYYY  HH:MM:SS  D1ZMETZ
MO  Reformat Output Record     MM/DD/YYYY  HH:MM:SS  D1ZMETZ
RP  Report Selection           MM/DD/YYYY  HH:MM:SS  D1ZMETZ
GC  Geographic Coding Definition MM/DD/YYYY  HH:MM:SS  D1ZMETZ
SB  Submit Batch Job           MM/DD/YYYY  HH:MM:SS  D1ZMETZ

```

2. The **Name/Address File Layout** screen (C1CPID10) appears.

Defining Street Address Input

The address fields on your input file are arranged to correspond to lines on an address label. You must define both address fields in order for CODE-1 Plus to locate the primary address information. Primary address information is found in either positions 30 to 54 or positions 56 to 85 of your input record.

1. Start at the **Address and ZIP Code Locations** screen.

HH:MM:SS CODE-1 Plus Name/Address Coding System C1CPID00
MM/DD/YYYY My Sample Job C1CPID10
Job Tutor Name/Address File Layout RXX.XM00
Address and ZIP Code Locations

[ADDRDF] Specify input file Street Address location: # Position Len
Location Method L 1 30 25
M = Move street address from single field 2 56 30
F = Format (string) multiple fields together 3
L = Locate address in multiple address lines 4
5
6

[CS ZIP] Specify input file City/State/ZIP location: Pos Len
Location Method S City or City/ST . 87 20
A = City/ST/ZIP in above multiple lines Separate State . 108 2
C = City/ST in above multiple lines, sep ZIP
M = City/ST in single field, ZIP in another
S = City, ST, and ZIP in separate fields
X = City/ST/ZIP in single field
ZIP Code Position 111 Format . . C 9, B, C, P
9=4-byte binary, B=3-byte binary, C=5-byte character, P=3-byte packed
More...

F3=Exit F6=Update F24=Field Search

2. In your sample file, the street address information is contained in two lines. Type **L** in the **Location Method** field under “Specify input file Street Address Location” to tell CODE-1 Plus that the address information is contained in 2, 3, 4, 5, or 6 lines with or without a city name.
3. Now, you need to tell CODE-1 Plus where the first address line starts. Looking at your sample input file in the table on [page 233](#), you see that the first line of address information starts in position 30. Type **30** in the first street address **Position** field.
4. After telling CODE-1 Plus where the first line of address information begins, you need to tell CODE-1 Plus the length of this information in your sample input file. Returning once again to the table on [page 233](#), you see that your first line of address information ends in position 54. This means that the length of the first address line is 25 characters long. Type **25** in the first street address **Length** field.
5. Now, you need to tell CODE-1 Plus where the second line of address information starts and its length, just like in steps 4 and 5. Once again, looking at the table on [page 233](#), you see that the second line of address information starts in position 56. Type **56** in the second street address **Position** field.
6. In the table, the second line of address information is 30 characters long. Type **30** in the second street address **Length** field.

You have completed specifying the street address information for your sample job.

Defining the City/State/ZIP Code Layout

The city, state, and ZIP Code information in your sample input file is located in separate fields. You must specify the location, length, and format of each of these three data elements.

Looking at the table on [page 233](#), you can see that the city information is located in positions 87 to 106, the state information is located in positions 108 to 109, and the ZIP Code information is located in positions 111 to 115 in your sample input file. You will need to define all of this information for CODE-1 Plus.

1. Start at the **Address and ZIP Code Locations** screen.

```
HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPID00
MM/DD/YYYY      My Sample Job                          C1CPID10
Job Tutor      Name/Address File Layout                  RXX.XM00
                Address and ZIP Code Locations

[ADDRDF] Specify input file Street Address location:  #   Position   Len
Location method . . . . . L                          1         30    25
M = Move street address from single field            2         56    30
F = Format (string) multiple fields together          3
L = Locate address in multiple address lines          4
                                                    5
                                                    6

[CS ZIP] Specify input file City/State/ZIP location:
Location Method . . . . . S                          Pos   Len
A = City/ST/ZIP in above multiple lines              City or City/ST . 87    20
C = City/ST in above multiple lines, sep ZIP          Separate State . 108   2
M = City/ST in single field, ZIP in another
S = City, ST, and ZIP in separate fields
X = City/ST/ZIP in single field
ZIP Code Position . . . . . 111      Format . . C    9, B, C, P
9=4-byte binary, B=3-byte binary, C=5-byte character, P=3-byte packed
More...

F3=Exit   F6=Update                          F24=Field Search
```

2. First you need to define how the city, state, and ZIP Code information resides in your sample input file. In your file, the city, state, and ZIP Code are in three separate fields. Type **S** in the **Location Method** field under "Specify input file City/State/ZIP Code Location."
3. Now, you need to tell CODE-1 Plus where the ZIP Code information is located in your input file. Looking at the table on [page 233](#), you see that this information starts in position 111. Type **111** in the **ZIP Code Position** field.
4. In this next step, you need to tell CODE-1 Plus that your ZIP Code is in a 5-byte character format by using the code C. Type **C** in the **ZIP Code Format** field.
5. Next, you need to tell CODE-1 Plus the location of your city information in the input file. Looking at the table on [page 233](#) once again, you can see that the city information starts in position 87. Type **87** in the **City or City/ST Position** field.
6. Now, you need to tell CODE-1 Plus the length of your city information. According to our table, the length of the city information is 20 characters. Type **20** in the **City or City/ST Length** field.
7. Next, you need to tell CODE-1 Plus the location of your state information in your input file. Looking at the table on [page 233](#), you see that your state information starts in position 108. Type **108** in the **Separate State Position** field.

- Now, you need to tell CODE-1 Plus the length of your state information. According to our table, the length of the state information is 2 characters long. Type **2** in the **Separate State Length** field.

Exiting the Name/Address File Layout Component

You have now defined all of the input file data for your sample job. To exit this component and save the information you have defined, follow the steps below.

- Press **F6** to exit and save the updated **Name/Address File Layout** component. The data is saved, and the C1CPOP10 screen appears asking if you want to save your data to an external file.
- Press **F12**. The **Define/Submit CODE-1 Plus Job** screen (C1CPDS02) appears.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPDS00
MM/DD/YYYY      My Sample Job                          C1CPDS02
Job Tutor      Define/Submit CODE-1 Plus Job             RXX.XM00

Type options, press Enter.
2=Edit 6=Create

Function                                Date      Time      User
----- Last Activity -----
PX _ Defaults for Print Output           MM/DD/YYYY HH:MM:SS D1ZMETZ
MI _ Reformat Input Record               MM/DD/YYYY HH:MM:SS D1ZMETZ
ID _ Name/Address File Layout            MM/DD/YYYY HH:MM:SS D1ZMETZ
OD _ Name/Address Record Posting         MM/DD/YYYY HH:MM:SS D1ZMETZ
MO _ Reformat Output Record              MM/DD/YYYY HH:MM:SS D1ZMETZ
RP _ Report Selection                    MM/DD/YYYY HH:MM:SS D1ZMETZ
GC _ Geographic Coding Definition         MM/DD/YYYY HH:MM:SS D1ZMETZ

SB _ Submit Batch Job                    MM/DD/YYYY HH:MM:SS D1ZMETZ

F3=Exit  F12=PrevScrn

```

You have specified the input file layout of your input name-and-address file.

Defining Your Output Information

Now that you have defined your input information, you will need to define your output information. In this part of the tutorial, you will define how to store the following information:

- 5-digit ZIP Code
- Standardized address
- Individual address elements
- Normalized address lines

- Standardized city and state information
- ZIP + 4 Code
- Carrier route code
- Return codes
- Default indicators
- Information returned from the Line of Travel master file

Before you begin defining this information, you need to determine how you want your output information to appear in the output record. For your sample job, you want CODE-1 Plus to store the output records in the same format as the input records, with the ZIP + 4 Code and carrier route code added as follows.

Position	Data Element
116-120	ZIP + 4 Code (stored with preceding hyphen)
122-125	Carrier route code
126-130	LOT Code (numeric and alphabetic)

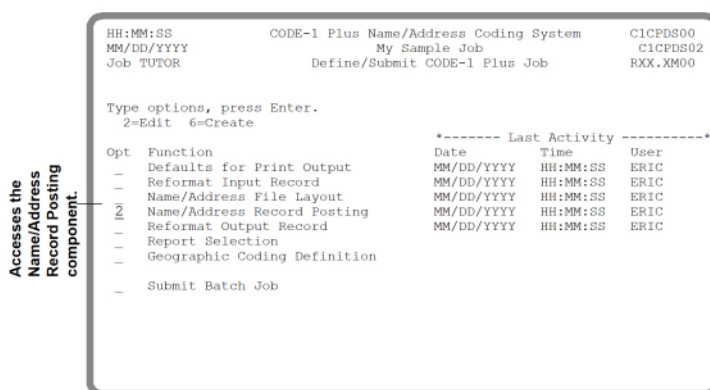
Remember, on [page 233](#) your ZIP Code information ended in position 115—that is why the ZIP + 4 Code starts in position 116.

In addition, you want CODE-1 Plus to store the normalized address (if no match was found), the individual standardized address elements, and return codes. You want these components stored as follows:

Position	Data Element
131-181	Address Elements: House Number (10 characters in length) Leading Directional (2 characters in length) Street Name (15 characters in length) Street Suffix (4 characters in length) Apartment Designator (1 character in length) Apartment Number (1 character in length)
183-212	Normalized Address Line 1
214-238	Normalized Address Line 2
240-282	Return Codes

You are now ready to define your output information.

1. Type **2** in the **Opt** field next to **Name/Address File Layout**, and press **Enter**.



The **ZIP Code Storage** screen (C1CPOD010) appears, as follows. This is the first screen in the **Name/Address Record Posting** component.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPOD00
MM/DD/YYYY          My Sample Job                            C1CPOD010
Job TUTOR          Name/Address Record Posting              RXX.XM00
                  ZIP Code Storage

Specify ZIP Code storage, if desired.

Return Code for ZIP Code storage . . . . . Posn Len
                                     1
Corrected or confirmed ZIP Code. . . . . 5/3
Format for ZIP storage . . . . . C P

More...

F3=Exit  F6=Update                      F24=Field Search

```

ZIP Code Storage

In this part of the tutorial, you want to tell CODE-1 Plus where to store the ZIP Code return code in the output file. The ZIP Code return code tells you why the ZIP Code information was not stored in your output file.

1. Start at the **ZIP Code Storage** screen (C1CPOD010).

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPOD00
MM/DD/YYYY          My Sample Job                            C1CPOD010
Job TUTOR          Name/Address Record Posting              RXX.XM00
                  ZIP Code Storage

[Z5 OUT] Specify ZIP Code storage, if desired:

Location for the ZIP Code return code . . . . . Posn Len
                                     257 1
Location for the ZIP Code . . . . . 111 5/3
Format . . C C, P
C = Character, P = Packed

Location for the Source of Final ZIP Code return code . . 50 1
Location for PO Box-only ZIP Code flag . . . . .
Location for Valid ZIP Code Flag . . . . .

More...

F3=Exit  F6=Update                      F24=Field Search

```

2. For your sample job, you want CODE-1 Plus to store the ZIP Code return code in position 257 on the output file. Type **257** in the **Return Code for ZIP Code storage** field.
3. Next, you need to tell CODE-1 Plus where you would like the standardized ZIP Code stored in your output file. For your sample job, you want the standardized ZIP Code to be stored in position 111. Type **111** in the **Corrected or confirmed ZIP Code** field.
4. Finally, you need to tell CODE-1 Plus the format of your output ZIP Code. You want the ZIP Code to be stored as a 5-byte character number, so type **C** in the **Format for ZIP storage** field.
5. When you finish filling in the fields, page down to the Carrier Route Storage screen (C1CPOD020).

Carrier Route Storage

In this next step, you want to specify where to store the carrier route code and in what type of format.

1. Start at the **Carrier Route Storage** screen (C1CPOD020).

```
HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPOD00
MM/DD/YYYY      My Sample Job                             C1CPOD020
Job Tutor       Name/Address Record Posting               RXX.XM00
                Carrier Route Storage

[CR OUT] Specify Carrier Route storage, if desired:
                Posn  Len
Location for Carrier Route return code . . . . . 259    1
Location for Carrier Route code . . . . . 122    4

More...

F3=Exit  F6=Update  F24=Field Search
```

2. First, tell CODE-1 Plus where you want the carrier route return code stored on your output file. Type **259** in the **Return Code for Carrier Route** storage field.
3. Next, you need to tell CODE-1 Plus where you want the carrier route code stored in your output file. Type **122** in the **Carrier Route Code** field.
4. When you finish filling in the fields, page down to the **ZIP + 4 Add-on Storage** screen (C1CPOD030).

ZIP + 4 Add-On Storage

In this section, you are going to tell CODE-1 Plus what to do with the ZIP + 4 information in your output file. For your sample job, you want to store the ZIP + 4 Code in character format with a preceding hyphen in positions 116 to 120 of the output record. You also want to store the return code for ZIP + 4 storage in the next available position (position 261) of your designated area for return codes.

1. Start at the **ZIP + 4 Add-on Storage** (C1CPOD030) screen.


```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPOD00
MM/DD/YYYY      My Sample Job                          C1CPOD030
Job Tutor      Name/Address Record Posting              RXX.XM00
               ZIP+4 Add-on Storage

[Z4 OUT] Specify ZIP+4 Add-on storage, if desired:

Location for ZIP+4 return code . . . . . 261      1
Location for ZIP+4 code . . . . . 116      4/5/3
Format . . - C, -, P
C = Character, - = Hyphen before character, P = 3-byte packed number
Location for DPBC Add-on, without check-digit . . . . . 2
Location for DPBC Add-on check-digit . . . . . 1
Location for Delivery Point Bar Code (DPBC) . . . . . 6
Location for DPBC Add-on, with check-digit . . . . . 3

Location for Z4CHANGE return code . . . . . 110      1
Location for Vintage Date of CODE-1 Plus Database . . . . 112
Format . . 6      4/6/3/2
YYMM: C = Character, P = Packed, B = Binary
YYYYMM: 6 = Character, 4 = Packed, 3 = Binary
More...

F3=Exit  F6=Update      F24=Field Search

```

2. First, you need to tell CODE-1 Plus where to store the ZIP + 4 return code in your output file. Type **261** in the **Return Code for ZIP + 4** storage field.
3. Next, you need to tell CODE-1 Plus where to store the standardized ZIP + 4 Code in your output file. Type **116** in the **ZIP + 4 Add-on** field.
4. Now, you need to tell CODE-1 Plus the format of your ZIP + 4 Code information. You want the ZIP + 4 Code to be stored as a 4-byte character number with a preceding hyphen, so type - in the **Format of ZIP + 4 Code** field.
5. When you finish filling in the fields, page down to the **Standardized Address Storage** screen (C1CPOD040).

Standardized Address Storage

In this step, you will specify how you want to store the standardized address in your output information. For this example, you want to store your address and apartment information together. You want this information stored in the same place as in the input record (positions 56 to 85), and will specify “Replace Input” instead of defining an output position. You also want to store the return code for standardized address storage in the next available position (position 263) of the designated area for return codes.

1. Start at the **Standardized Address Storage** (C1CPOD040) screen.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CP0D00
MM/DD/YYYY      My Sample Job                          C1CP0D040
Job TUTOR      Name/Address Record Posting              RXX.XM00
                Standardized Address Storage

[SA OUT] Specify Standardized Address storage, if desired:      Posn Len
Location for Std Address WITH Apt                               . Y  N
Replace Input? . . . . . Y  N
If Y: Blank out unused address lines? . . . . . Y  N
If N: Specify storage location . . . . . Y  N
Store Input if Std Address too long or not matched? . . Y  N
Location for Std Address WITHOUT Apt . . . . . Y  N
Replace even if already stored with Apt? . . . . . Y  N
Location for Apt/PMB number . . . . . Y  P, X
Treatment if Std Address with Apt already stored . . . Y  P, X
Y = Replace, P = Store Input PMB, X = Store Apt Info
Location for Std Address return code . . . . .240 1
Location for PMB return code . . . . . 1
Location for Source of Matched Address return code . . . 1
Location for Dropped Information Type return code . . . 1
Location for LACS indicator . . . . . 1

More...

```

2. The next available location on the output record for information is position 240. You want the Standardized Address Return Code to be placed in position 240 on the output record, so type **240** in the **Return Code for Standardized Address** storage field.
3. Next, you need to decide if you want to replace your input information on the output record with the new standardized address. For your example job, you want to replace it with the new information, so type **Y** in the **Replace Input** field.
4. When you finish filling in the fields, page down to the Address Elements Storage screen (C1CP0D060).

Address Elements Storage

In this section, you need to tell CODE-1 Plus how you want to store each address element. Address elements include the house number, leading directional, trailing directional, street name, suffix, and other information included in a normal street address line. You are going to store each address element in its own field in positions 121 to 183. This allows for a 10-character **Street Name** field and a blank field between each of the other address element fields.

1. Start at the **Address Elements Storage** screen (C1CP0D060).

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CP0D00
MM/DD/YYYY      My Sample Job                          C1CP0D060
[JOB]          Name/Address Record Posting              RXX.XM00
                Address Element Storage

[AE OUT] Specify storage of individual Address Elements:      Posn  Len
House Number . . . . . 131  10
Leading Directional . . . . . 142  2
Street Name . . . . . 145  15
Suffix . . . . . 161  4
Trailing Directional . . . . . 166  2
Apartment Designator . . . . . 169  4
Apartment Number . . . . . 174  8
RR/HC Type . . . . . 3
Box Number . . . . . 10
Private Mail Box Designator . . . . . 201  20
Private Mail Box Number . . . . . 204
Store All Private Mail Box Numbers? . . . . . Y
What should be stored when Standardized Address is not avail N
B = Blanks (default) N = Elements from primary address line
X = Nothing          M = Elements from 2 lines of normalized addr More...

F3=Exit  F6=Update                      F24=Field Search

```

2. First, you need to enter the location for the house number in your output file. Type **131** in the **House Number Position** field.
3. Next, you need to tell CODE-1 Plus where to place the leading directional information in your output file. Type **142** in the **Leading Directional Position** field.
4. Next, you need to tell CODE-1 Plus where to place the street name information in your output file. Type **145** in the **Street Name Position** field.
5. Next, you need to tell CODE-1 Plus how long the street name information is. Type **15** in the **Street Name Length** field.
6. Next, you need to tell CODE-1 Plus where to place the suffix information in your output file. Type **161** in the **Suffix Position** field.
7. Next, you need to tell CODE-1 Plus where the trailing directional information should be placed in your output file. Type **166** in the **Trailing Directional Position** field.
8. Next, you need to tell CODE-1 Plus where to place the apartment designator information in your output file. Type **169** in the **Apartment Designator Position** field.
9. Next, you need to tell CODE-1 Plus where to place the apartment number information in your output file. Type **174** in the **Apartment Number Position** field.
10. Next, you need to tell CODE-1 Plus where to place the private mailbox designator in your output file. Type 201 in the Private Mailbox Designator Position field.
11. Next, you need to tell CODE-1 Plus where to place the private mailbox number in your output file. Type 204 in the Private Mailbox Number Position field.
12. When you finish filling in the fields, page down to the **City and State Storage** screen (C1CPOD070).

City/State Storage

In this next section, you need to tell CODE-1 Plus how to store the city name and state abbreviation. For your sample job, you want to store the city name and state abbreviation in separate fields, as they appear in the input file. CODE-1 Plus gives you the options of storing the standard 28-character form of the city name or the short (13-character) form of the city name. A short city name is the USPS-accepted abbreviation of a city. For example, the short city name for Macomb Township, MI is Macom Twp.

You only store want to the short form of a city name if the full city name exceeds the length of your city name field. In your sample file, your city name field is 20 characters long. Additionally, you want to tell CODE-1 Plus to store the return code for city/state storage in the next available position (position 255) of the return code area of your output file.

1. Start at the **City and State Storage** screen (C1CPOD070).

2. First, you need to tell CODE-1 Plus where you would like the city/state return code stored in your output file. Type **242** in the Location for City/State Return Code storage field.
3. Next, you need to tell CODE-1 Plus where to put the city name in your output file. Type **87** in the Location for **City Nameposition** field.
4. Next, you need to tell CODE-1 Plus the length of your city name information. Type **20** in the **City Name Length** field.
5. Next, you need to tell CODE-1 Plus the location for the state abbreviation in your output file. Type **108** in the **State Abbreviation (USPS Standard)** field.
6. When you finish filling in the fields, page down. The **City and State Storage Options** screen (C1CPOD073) displays.
7. Page down. The **County and Congressional Storage Option** screen (C1CPOD076) displays.
8. Page down. The **Address Match Information Storage** screen (C1CPOD080) displays.

Address Match Information Storage

The **Address Match Information** Storage screen allows you to specify storage locations for each of the return codes, match scores, and other qualitative and quantitative data available through CODE-1 Plus. For your sample job, you want to store all of the information in the remaining positions designated for return codes in your output record. You are going to separate each field by a blank position.

1. Start at the **Address Match Information Storage** screen (C1CPOD080).

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPOD00
MM/DD/YYYY          My Sample Job                             C1CPOD080
Job TUTOR          Name/Address Record Posting               RXK.XM00
                  Address Match Information Storage

[AM OUT] Specify storage of Address Match result information:  Posn  Len
USPS Record Type Code . . . . . 250 1
General Return Code . . . . . 253 1
Directional Return Code . . . . . 255 1
Suffix Return Code . . . . . 244 1
Apartment Return Code . . . . . 246 1
Firm-name Return Code . . . . . 248 1
Overall Probable Correctness Code . . . . . 248 1
Alternate Address Scheme Indicator . . . . . 1
Street-name Match Score . . . . . 268 1
Firm-name Match Score . . . . . 270 1
Address Probable Correctness Code . . . . . 272 1
ZIP Code Confirmed/Altered/Original indicator . . . . . 274 1
VeriMove Universal Field . . . . . 250

More...

F3-Exit  F6-Update                                F24-Field Search

```

2. First, you need to tell CODE-1 Plus the location for the USPS Record Type Code in your output file. Type **250** in the **USPS Record Type** field.
3. Next, you need to tell CODE-1 Plus the location for the General Return Code in your output file. Type **253** in the **General Return Code** field.
4. Then, you need to tell CODE-1 Plus the location for the Directional Return Code in your output file. Type **255** in the **Directional Return Code** field.
5. Then, you need to tell CODE-1 Plus the location for the Suffix Return Code in your output file. Type **244** in the **Suffix Return Code** field.
6. Next, you need to tell CODE-1 Plus the location for the Apartment Return Code in your output file. Type **246** in the **Apartment Return Code** field.
7. Next, you need to tell CODE-1 Plus the location for the overall probable correctness number for your addresses. Type **248** in the **Overall Probable Correctness** field.
8. Next, you need to tell CODE-1 Plus where to store the street-name match score in your output file. Type **268** in the **Street-name Match Score** field.
9. Then, you need to tell CODE-1 Plus the location for the firm-name match score in your output file. Type **270** in the **Firm-name Match Score** field.
10. Finally, you need to tell CODE-1 Plus the location in your output file for the Address Probable Correctness code and the ZIP Code Confirmed/Altered/Original Indicator. Type **272** in the **Address Probable Correctness** field and **274** in the **ZIP Code Confirmed/Altered/Original** indicator field.
11. When you finish filling in the fields, page down to the **Normalized Address Information** screen (C1CPOD095).

Normalized Address and “Care Of” Information Storage

The **Normalized Address Information** Storage screen allows you to specify storage locations for the normalized address lines and information that was dropped during matching. You only want to store normalized address lines when the standardized address could not be stored for any reason in your sample job.

1. Start at the **Normalized Address Information Storage** screen (C1CPOD095).

```
HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPOD00
MM/DD/YYYY      My Sample Job                             C1CPOD095
Job TUTOR      Name/Address Record Posting                RXR.XM00
                Normalized and Care-of Address Information Storage

[AP OUT] Specify storage of Normalized and Care-of Address:  Posn  Len
Care-of Information, Address 1 . . . . .
Address 2 . . . . .

Normalized Address 1 . . . . . Condition X . . . . . 183 30
Normalized Address 2 . . . . . Condition X . . . . . 214 25
Conditions for storage of normalized addresses:
  A = All records
  X = Only records for which a Standardized (default)
    Address was not stored
  D = Store dropped dual address from matched address
Normalized all address types . . . . . Y, N
  Y = Normalize all address types (default)
  N = Selective normalization
    General Delivery, PO Box, RR/HC address types only
                                More...

F3=Exit  F6=Update                                F24=Field Search
```

2. First, you need to tell CODE-1 Plus how you want the normalized primary address stored in the output file. You want CODE-1 Plus to store the normalized address only when the standardized address is not stored, so type **X** in the **Normalized Address 1 Condition** field.
3. Now, you need to tell CODE-1 Plus where to place the normalized primary address in your output file. Type **183** in the **Normalized Address 1 Position** field.
4. Next, you need to tell CODE-1 Plus the length of the normalized primary address information in your output file. Type **30** in the **Normalized Address 1 Length** field.
5. Now, you need to tell CODE-1 Plus how you want the normalized secondary address stored in the output file. Once again, you want CODE-1 Plus to stored the normalized secondary address only when the standardized address is not stored, so type **X** in the **Normalized Address 2 Condition** field.
6. Next, you need to tell CODE-1 Plus the length of the normalized secondary address in your output file. Type **214** in the **Normalized Address 2 Position** field.
7. Finally, you need to tell CODE-1 Plus the length of the normalized secondary address information in your output file. Type **25** in the **Normalized Address 2 Length** field.
8. When you finish filling in the fields, page down to the **Line of Travel Storage** screen (C1CPOD100).

Exiting the Name/Address Record Posting Component

You have now given CODE-1 Plus all of your output requirements. To exit the **Name/Address Record Posting** component and save the new information:

1. Press **F6**. The data is saved, and the C1CPOP10 screen displays asking if you want to save your data to an external file.
2. Press **F12**. The **Define/Submit CODE-1 Plus Job** screen (C1CPDS02) displays.

HR:MM:SS CODE-1 Plus Name/Address Coding System C1CPDS00
MM/DD/YYYY My Sample Job C1CPDS02
Job Tutor Define/Submit CODE-1 Plus Job RXJ.XM00

Type options, press Enter.
2-Edit 6-Create

Function	Date	Time	User
PX - Defaults for Print Output	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
MI - Reformat Input Record	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
ID - Name/Address File Layout	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
OD - Name/Address Record Posting	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
MO - Reformat Output Record	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
RP - Report Selection	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
GC - Geographic Coding Definition	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
SB - Submit Batch Job	MM/DD/YYYY	HH:MM:SS	D1ZMETZ

F3=Exit F12=PrevScrn

You have specified the output file record posting requirements.

Selecting Reports to be Printed

In this step, you will simply select the reports that you want CODE-1 Plus to print. Remember that you only want the reports by state to print. These include the following reports:

- ZIP + 4 Coding by State Report
- Carrier Coding by State Report
- Line of Travel Coding by State Report
- Summary by State Report

These reports will be printed automatically, by default, unless otherwise specified. Additionally, you do not want the following reports to be printed:

- ZIP + 4 Coding by 3-Digit ZIP Report
- Carrier Coding by 3-Digit ZIP Report

- Line of Travel Coding by 3-Digit ZIP Report
- Summary by 3-Digit ZIP Report

To suppress these reports from printing, follow the steps below.

1. Start at the **Define/Submit CODE-1 Plus Job** screen. Type **2** in the **Opt** field next to **Report Selection**, and press **Enter**.

HH:MM:SS CODE-1 Plus Name/Address Coding System C1CPDS00
MM/DD/YYYY My Sample Job C1CPDS02
Job Tutor Define/Submit CODE-1 Plus Job RXX.XM00

Type options, press Enter.
2=Edit 6=Create

Accesses the Report Selection

Function	Date	Time	User
FX Defaults for Print Output	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
MI Reformat Input Record	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
ID Name/Address File Layout	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
OD Name/Address Record Posting	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
MO Reformat Output Record	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
RP 2 Report Selection	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
GC Geographic Coding Definition	MM/DD/YYYY	HH:MM:SS	D1ZMETZ
SB Submit Batch Job	MM/DD/YYYY	HH:MM:SS	D1ZMETZ

2. The **Report Selection** screen (C1CPRP10) appears.

HH:MM:SS CODE-1 Plus Name/Address Coding System C1CPRP00
MM/DD/YYYY My Sample Job C1CPRP10
Report Selection RXX.XM00

[REPORT] Specify the desired reports for printing:

Analysis of Matched Records.	Casing Option . . .
ZIP+4 Coding by State.	Y = All Upper
Carrier Coding by State.	N = Mixed Case
ZIP+4 Coding by List Code.	
Carrier Coding by List Code.	
ZIP+4 Coding by 3-Digit ZIP Code	
Carrier Coding by 3-Digit ZIP Code	
Processing Summary by State.	
Processing Summary by List Code.	
Processing Summary by 3-Digit ZIP Code	
Line of Travel Coding by State	
Line of Travel Coding by List Code	
Line of Travel Coding by 3-Digit Code. . . .	
National Deliverability Index (NDI). . . .	
Produce Separate USPS Form 3553.	
RDI Processing Summary Counts.	
RDI Processing Counts by List Code	
F3=Exit F6=Update	

3. Type **N** in the **ZIP + 4 Coding by 3-Digit ZIP** field to suppress this report from printing.
4. Type **N** in the **Carrier Coding by 3-Digit ZIP** field to suppress this report from printing.
5. Type **N** in the **Summary by 3-Digit ZIP** field to suppress this report from printing.
6. Type **N** in the **Line of Travel Coding by 3-Digit ZIP** field to suppress this report from printing.
7. Continue typing **N** next to the reports you do not want printed. You may leave the fields blank for the reports that you want to print. These reports are printed automatically when the job is executed.
8. To exit this component and save the updated information, press **F6**. The data is saved, and the C1CPOP10 screen appears asking you if you want to save your data to an external file.

9. Press **F12**. The **Define/Submit CODE-1 Plus Job** screen (C1CPDS02) appears.

```
HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPDS00
MM/DD/YYYY      My Sample Job                          C1CPDS01
Job Tutor      Define/Submit CODE-1 Plus Job              RXX.XM00

Type options, press Enter.
  2-Edit  6-Create

          *----- Last Activity -----*
Function      Date      Time      User
FX _ Defaults for Print Output      MM/DD/YYYY  HH:MM:SS  D1ZMETZ
MI _ Reformat Input Record          MM/DD/YYYY  HH:MM:SS  ZA003ME
ID _ Name/Address File Layout       MM/DD/YYYY  HH:MM:SS  D1ZMETZ
OD _ Name/Address Record Posting    MM/DD/YYYY  HH:MM:SS  D1ZMETZ
MO _ Reformat Output Record         MM/DD/YYYY  HH:MM:SS  ZA003ME
RP _ Report Selection               MM/DD/YYYY  HH:MM:SS  D1ZMETZ
SB _ Submit Batch Job               MM/DD/YYYY  HH:MM:SS  D1ZMETZ

F3=Exit  F12=PrevScrn
```

You have selected the reports you want to be printed at job completion.

Submitting The Job

Your final task is to submit the job. To do this, you have to verify your input and output files. Your input and output files should be defined as follows:

- Input File
- C1TUTOR in library DEMO, member *FIRST.
- Output Files
- C1NAMTUTOR in library DEMO, member CODED
- C1NAMTUTOR in library DEMO, member UNCODED
- C1NAMTUTOR in library DEMO, member INVZIP

For demonstration purposes, you will also limit processing to only those records with ZIP Codes between 20000 and 39999. To access the Submit Batch Job component, follow the steps below.

1. Start at the **Define/Submit CODE-1 Plus Job** screen.

Access the
Submit Batch Job

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPDS00
MM/DD/YYYY      My Sample Job                          C1CPDS01
Job TUTOR      Define/Submit CODE-1 Plus Job              RXX.XM00

Type options, press Enter.
2=Edit  6=Create

Function
FX  _ Defaults for Print Output
MI  _ Reformat Input Record
ID  _ Name/Address File Layout
OD  _ Name/Address Record Posting
MO  _ Reformat Output Record
RP  _ Report Selection

*----- Last Activity -----*
Date      Time      User
MM/DD/YYYY HH:MM:SS D1ZMETZ
MM/DD/YYYY HH:MM:SS ZA003ME
MM/DD/YYYY HH:MM:SS D1ZMETZ
MM/DD/YYYY HH:MM:SS D1ZMETZ
MM/DD/YYYY HH:MM:SS ZA003ME
MM/DD/YYYY HH:MM:SS D1ZMETZ

SB 2 Submit Batch Job      MM/DD/YYYY HH:MM:SS D1ZMETZ
  
```

2. In order to access the Submit Batch Job screen, type **2** in the **Opt** field next to **Submit Batch Job**, and press **Enter**. The first **Submit CODE-1 Plus Job** screen (C1CPSB01) appears, with the fields filled in as entered on the **Create New Job** screen (C1CPNJ01).

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY      My Sample Job                          C1CPSB01
Job TUTOR      Submit CODE-1 Plus Job                    RXX.XM00

Specify Job details:
[C1BMNAM] Input N/A file . . . . . C1TUTOR
Library . . . . . DEMO
Member . . . . . *FIRST
Exit Routine . . . . .

Job description . . . . . QDFTJOB
Library . . . . . QGPL
Job name . . . . . @TUTOR0001

Hold on job queue? . . . . . Y, N
Extended List Code (more than 200) support required? . . . . . Y, N
[PGMNAM] Select Address Matcher memory model . . . . . Blank, S, M, L, H
Use DFW Large Memory Module (DPV010L)? . . . . . Y, N
Use RDI Large Memory Module (DPV040L)? . . . . . Y, N
[DB LIB] CODE-1 Plus Database Library . . . . . C1PMAY230
[BYPEXP] Override an expired CODE-1 Plus database? . . . . . Y, N
More...

F3=Exit  F6=Submit  F7=Parm Test
  
```

3. Verify that the information is correct.
4. Page down. The second **Submit CODE-1 Plus Job** screen (C1CPSB02) displays the fields filled in with default values. The record length defaults to whatever is required by your output definitions. All library fields default to the library being used for job objects and all member fields default as shown below.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY      My Sample Job                          C1CPSB02
Job TUTOR      Submit CODE-1 Plus Job                    RXX.XM00

Select Address Matching output files:

Record length for output files . . . . . 274

[C1BMCOK] Successfully Coded output file . . . . . CINAMTUTOR
Library . . . . . DEMO
Member . . . . . CODED
Exit Routine . . . . .

[C1BMZP4] Produce Coded ZIP+4 output file? N . . . . . CINAMTUTOR
Library . . . . . DEMO
Member . . . . . ZIP4
Exit Routine . . . . .

More...

F3=Exit  F6=Submit  F7=Parm Test
  
```

5. Verify that the output files are correctly defined.
6. Because you do not want to produce a coded ZIP + 4 file, type **N** in the **Produce Coded ZIP + 4** output file field.
7. Page down. The third **Submit CODE-1 Plus Job** screen (C1CPSB03) displays with the fields filled in with default values.
8. Verify that all of the output files are correctly defined.
9. Type **Y** in the **Produce Invalid-ZIP output** field.
10. Type **Y** in the **Produce Uncoded output file** field.
11. Type **Y** in the **Produce Statistics output file** field.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY          My Sample Job                            C1CPSB03
Job TUTOR          Submit CODE-1 Plus Job                     RXX.XM00

Select Address Matching output files:

[C1BMIZP] Produce Invalid-ZIP output file?  Y . . . .
Library . . . . .
Member . . . . .
Exit Routine . . . . .

[C1BMNCO] Produce Uncoded output file? . . Y . . . .
Library . . . . .
Member . . . . .
Exit Routine . . . . .

[C1BMSTA] Produce Statistics output file? . Y . . . .
Library . . . . .
Member . . . . .

More...

F3=Exit  F6=Submit  F7=Parm Test

```

12. When you complete this screen as shown above, press page down twice.

The sixth **Submit CODE-1 Plus Job** screen (C1CPSB06) displays with several options for limiting the amount of input from a given input file. We want to restrict processing to only those records with ZIP Codes between 20000 and 39999

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPSB00
MM/DD/YYYY          My Sample Job                            C1CPSB06
Job TUTOR          Submit CODE-1 Plus Job                     RXX.XM00

[HEADER] Restrict input to Range of ZIPs, if desired:
Low ZIP Code . . . 20000 (records with lower ZIPs will be bypassed)
High ZIP Code . . . 39999 (record with higher ZIP will be treated as EOF)

[FILEDF] Skip records at beginning of file, if desired:
Records to skip . .

[FILEDF] Limit processing to a fraction of the input records, if desired:
Decimal fraction . .

[FILEDF] Stop processing after a number of records, if desired:
Record Limit . . . .

[NTHSEL] Process Nth number of records, if desired:
NTH number of records to process . . . . .
Include/Exclude option . . . . .
INC = include Nth number of records EXC = exclude Nth number of records
Fraction of records . . . . . More...

F3=Exit  F6=Submit  F7=Parm Test

```

13. Type 20000 in the Low ZIP Code field.

14. Type 39999 in the High ZIP Code field.
15. To submit your job, press **F6**.
16. CODE-1 Plus processes the input file according to our job definition and writes the output data to the specified output files. The **Define/Submit CODE-1 Plus Job** screen (C1CPDS02) displays.

You have completed the sample job. Continue reading to see the output files and output reports. You may want to compare these with your own results.

Reading Your Output Files and Reports

When running a job, CODE-1 Plus automatically generates two report files: PRNTXLG and PRNTRPT. These report files contain all of the CODE-1 Plus reports that were created as the result of a job execution, as follows.

- PRNTXLG—contains only one report, the Execution Log Report. This report will always be printed.
- PRNTRPT—contains up to 15 different reports (all of which are described in detail in Chapter 10). Four reports will be output to this file automatically:
 - Parameter Record List Report
 - Control Totals Report
 - Address-Match Execution Statistics Report
 - USPS Form 3553 (this will only be generated for jobs run with a valid CASS configuration)

The other reports that are located in this file are the reports you defined earlier in this tutorial. So, your sample job will produce the four reports listed above and the following report you chose:

- Processing Summary by State Report

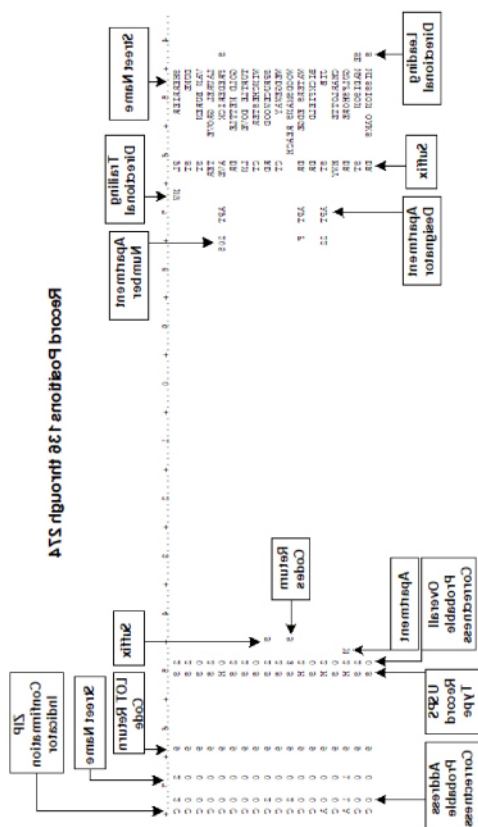
You will also generate the following output files:

- **Coded Output File**—Look at the member called CODED in the file C1NAMTUTOR located in the library called DEMO. This is the output file of successfully coded addresses.
- **Uncoded Output File**—Look at the member called UNCODED in the file C1NAMTUTOR located in the library called DEMO. This is the output file of unsuccessfully coded addresses.
- **Invalid ZIP Output File**—Look at the member called INVZIP in the file C1NAMTUTOR located in the library called DEMO. This is the output file of unsuccessfully coded addresses.

The following pages show the output files generated by this sample job. Please see Chapter 14 for more information on CODE-1 Plus reports.

Record Position: 1 through 138

.Coded Output File, Positions 1 through 135



Coded Output File, Positions 136 through 274

Record Positions 1 through 115									
TH059	BOB	SCAGGE							37205
TH049	AL	STEWART							37205
TH059	PETER	WHITE							37207

Record Positions 216 through 274									
.....2.....3.....4.....5.....6.....7.....8.....9.....0.....									
M	6	0							
M	2	0							
M	2	0							

Return Codes
indicating that
CODE-1 Plus
could not code
these addresses

Uncoded Output File

Record Positions 1 through 125

.....1.....2.....3.....4.....5.....6.....7.....8.....9.....0.....1.....2.....
TH019 JIMMY BUFFET PIRATES OVER FORTY 5525 GRANNY WHITE PK 30569

Record Positions 180 through 274

*Return Codes
indicating an
invalid ZIP Code*

8.....9.....0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....0.....
PIRATES OVER FORTY 2 2 0

Uncoded Output File

10 - Generating Reports

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Understanding the CODE-1 Plus Reports

Required Reports

CODE-1 Plus automatically generates the following reports for all jobs:

- Address-Match Execution Statistics
- Control Totals Report
- Execution Log
- Parameter Record Listing

Understanding the CODE-1 Plus Reports

Required Reports

CODE-1 Plus automatically generates the following reports for all jobs:

- Address-Match Execution Statistics
- Control Totals Report
- Execution Log
- Parameter Record Listing

Optional Reports

In addition to the automatically generated required reports, you can generate the following optional reports.

- Analysis of Matched Records
- Build Report
- Carrier Coding by 3-Digit ZIP
- Carrier Coding by List Code

- Carrier Coding by State
- Database Print Report
- Delivery Point Validation Processing Summary.
- Delivery Point Validation by List Code
- Line of Travel Coding by 3-Digit ZIP
- Line of Travel Coding by List Code
- Line of Travel Coding by State
- National Delivery Index (NDI)
- Processing Summary by 3-Digit ZIP
- Processing Summary by List Code
- Processing Summary by State
- Residential Delivery File Build Execution Log
- Residential Delivery File Build Report
- USPS Form 3553
- ZIP + 4 Coding by State
- ZIP + 4 Coding by List Code
- ZIP + 4 Coding by 3-Digit ZIP

Report Parameter

You can use the REPORT parameter to define the reports to generate when you submit a batch job. For more information on the REPORT parameter, please refer to the section “REPORT” in “Parameter Reference” in your **CODE-1 Plus Reference Guide**.

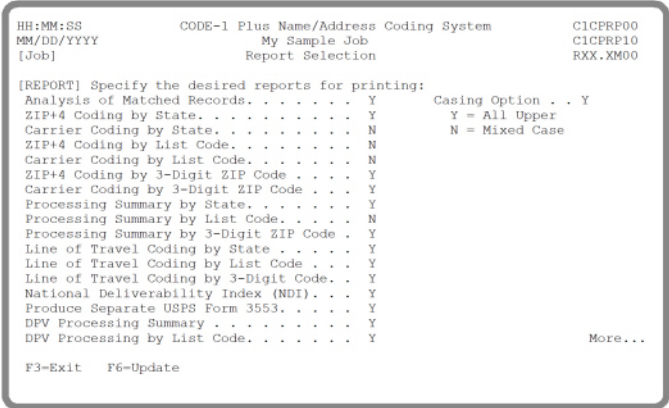
Build Parameter

You can use the BUILD parameter to generate the BUILD report. For more information on the BUILD parameter, please refer to the section “BUILD” in “Parameter Reference” in your **CODE-1 Plus Reference Guide**.

Using the IBM i Screens to Generate Reports

You can use the Report Selection (C1CPRP10) screen to specify the reports to print at the end of your CODE-1 Plus job. To access the Report Selection (C1CPRP10) screen:

- 1. From the Define/Submit CODE-1 Plus Job screen (C1CPDS02), select Report Selection.
- 2. The Report Selection screen (C1CPRP10) displays.



- 3. Use the following table to complete the fields on the Report Selection screen (C1CPRP10).

Field Name	Description
Analysis of Matched Records	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
ZIP + 4 Coding by State	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
Carrier Coding by State	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
ZIP + 4 Coding by List Code	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
Carrier Coding by List Code	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.

Field Name	Description
ZIP + 4 Coding by 3-Digit ZIP Code	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
Carrier Coding by 3-Digit ZIP Code	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
Processing Summary by State	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
Processing Summary by List Code	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
Processing Summary by 3-Digit ZIP Code	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.

Field Name	Description
Line of Travel Coding by State	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
Line of Travel Coding by List Code	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
Line of Travel Coding by 3-Digit Code	<p>Optional. Code indicating whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
National Deliverability Index (NDI)	<p>Optional. Code indication whether this report is to be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is N.
Produce Separate USPS Form 3553	<p>Optional. Code indicating whether or not to print the USPS CASS Form 3553 in a separate print file. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is N.

Field Name	Description
DPV Processing Summary	Optional. Code indicating whether this report is to be printed. Enter one of the following codes: <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.
DPV Processing by List Code	Optional. Code indication whether this report is to be printed. Enter one of the following codes: <ul style="list-style-type: none"> • Y — Print the report. • N — Do not print the report. • Blank — Default is Y.

Function Keys

Function Key	Name	Description
F3	Exit	Exit from the Report Selection screen without saving any entered data.
F6	Update	Save the data and quit from the Report Selection screen.

You can use the Report Selection (C1CPRP11) screen to specify the Residential Delivery Indicator (RDI) reports to print at the end of your CODE-1 Plus job. To access the Report Selection screen (C1CPRP11):

1. From the Report Selection screen (C1CPRP10), page down to the Report Selection screen (C1CPRP11).
2. The Report Selection screen (C1CPRP11) displays.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPRP00
MM/DD/YY          My Sample Job                               C1CPRP11
[Job]             Report Selection                             RXX.XM00

[REPORT] Specify the desired reports for printing:

RDI Processing Summary Counts. . . . . Y
RDI Processing Counts by List Code . . . Y

                                                                 Bottom.

F3=Exit   F6=Update

```

3. Use the following table to complete the fields on the Report Selection screen (C1CPRP11).

Field Name	Description
RDI Processing Summary Counts	Optional. Code indicating whether the RDI counts are to be printed on the DPV/RDI Summary Report: <ul style="list-style-type: none"> • Y — Print RDI counts. • N — Do not print RDI counts. • Blank — Default is Y.
RDI Processing Counts by List Code	Code indicating whether or not to print this report. Enter one of the following codes: <ul style="list-style-type: none"> • Y — Print the RDI List Code Report. • N — Do not print the RDI List Code Report. • Blank — Default is Y.

Function Keys

Function Key	Name	Description
F3	Exit	Exit from the Report Selection screen without saving any entered data.

F6	Update	Save the data and quit from the Report Selection screen.
----	--------	--

Defining Defaults for Print Output

The Defaults for Print Output is one of the least complex components of CODE-1 Plus. This component allows you to define four items on your reports and the Execution log.

- Main header
- Date
- Number of lines per page
- Additional headers and footers

You define the following items from two screens.

- Defaults for Print Output (C1CPPX01)
- Define Headers and Footers (C1CPPX03)

Headers and Footers

The Defaults for Print Output component has five types of headers and footers.

- System header
- Main header
- Additional header
- System footer
- Additional footer

The system header always consists of a blank line, followed by the phrase “C1BM00 — CODE-1 Plus Name/Address Record Coding” and the name of the report. You cannot control the text of this header, nor can you suppress it from being printed at the top of each page of your reports.

The single line main header, which you define on the first Defaults for Print Output screen, is printed under the system header. The date prints on the far left side of the main header line.

The *additional header*, which can be up to four lines long, is printed as the very top line(s), above the blank line above the system header.

The system footer is identical to the system header, except that it is printed at the bottom of the report page, instead of the top. Like the system header, you cannot control the text, nor can you suppress it from being printed at the bottom of each page of each report.

The additional footer, which can be up to four lines long, is printed as the very last line(s), below the system heading.

Defining Report Format Defaults

Use the Defaults for Print Output screen to define defaults for generated reports. To access the Defaults for Print Output screen (C1CPPX01):

1. From the Define/Submit CODE-1 Plus Job screen (C1CPDS02), select Defaults for Print Output.
2. The Defaults for Print Output screen (C1CPPX01) displays.

```

HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPPX00
MM/DD/YYYY      My Sample Job                          C1CPPX01
Job TUTOR        Defaults for Print Output                RXX.XM00

[HEADER] Specify appearance for all reports:

Heading for all Reports. . . . . Sample Job
Date for all Reports . . . . . *CURRENT

[UHDxx/UFTxx] Specify user-defined Headers/Footers, press F11.

[PAGESZ] Override print file page size if required:

Reports (file PRNTRPT) . . . . . 60    25-225 (Default 60)
Execution Log (file PRNTXLG) . . . 60    25-225 (Default 60)

F3=Exit  F6=Update  F11=Headers/Footers

```

3. Use the following table to complete the fields on the Defaults for Print Output screen (C1CPPX01).

Field Name	Description
Heading for all Reports	Optional. Enter up to 40 alphanumeric characters to define the main header to print with the date at the top of your reports. No default.
Date for all Reports	Optional. Enter from 1 to 10 alphanumeric characters for the date to print with the main header at the top of your reports. Type either a date, or *CURRENT to print the system date. Default is *CURRENT.

Field Name	Description
Reports (file PRNTRPT)	Optional. Enter from 2 to 3 numeric digits for the number of lines to print on each page of all of the reports except the Execution Log. Minimum is 25. Maximum is 225. Default is 60.
Execution Log(file PRNTXLG)	Optional. Enter from 2 to 3 numeric digits for the number of lines to print on each page of the Execution Log. Minimum is 25. Maximum is 225. Default is 60.

Function Keys

Function Key	Name	Description
F3	Exit	Exit from the Defaults for Print Output screen without saving any entered data.
F6	Update	Save the data and quit from the Defaults for Print Output screen.
F11	Headers/Footers	Go to the Defaults for Print Output — Define Headers and Footers screen (C1CPPX03).

Defining Headers and Footers

Use the Define Headers and Footers screen to define the text to print on the headers and footers for your reports. To access the Define Headers and Footers screen (C1CPPX03):

1. From the Defaults for Print Output screen (C1CPPX01), press F11.
2. The Define Headers and Footers screen (C1CPPX03) displays.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System      C1CPPX00
MM/DD/YYYY          My Sample Job                            C1CPPX03
Job TUTOR          Defaults for Print Output                  RXX.XM00

Specify lines to surround all reports:

[UHDxx] Header Lines:
1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...
CODE-1 Plus Tutorial

[UFTxx] Footer Lines:
CODE-1 Plus User's Guide

1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...

F12=PrevScrn  F13=Remove all  F20=Scroll right

```

Press F20 to scroll to the right and displays screen C1CPPX04, which is a continuation of the numbered positions that are available for your header and footer information. Press F19 to scroll back to the left and display the screen above.

3. Use the following table to complete the fields on the Define Headers and Footers screen (C1CPPX03).

Field Name	Description
Header Lines	Optional. Enter up to 4 lines of up to 132 alphanumeric characters each for the additional header lines that you want to print at the top of your reports. No default.
Footer Lines	Optional. Enter up to 4 lines of up to 132 alphanumeric characters each for the additional footer lines that you want to print at the bottom of your reports. No default.

Function Keys

Function Key	Name	Description
F3	Exit	Exit from the Defaults for Print Output screen without saving any entered data.

F6	Update	Save the data and quit from the Defaults for Print Output screen.
F11	Headers/Footers	Go to the Defaults for Print Output — Define Headers and Footers screen (C1CPPX03).
F12	PrevScrn	Save the additional headers and footers and go to the Defaults for Print Output screen (C1CPPX01).
F13	Remove All	Remove all of the data in the Header Lines and Footer Lines fields.
F19	Scroll Left	Scroll to the left on the screen to display columns 1-79 of the header and footer lines (screen C1CPPX03). This function key is only valid when columns 54-135 are displayed.
F20	Scroll Right	Scroll to the right on the screen to display columns 54-132 of the header and footer lines (screen C1CPPX03). This function key is only valid when columns 1-79 are displayed.

Address-Match Execution Statistics Report

The Address-Match Execution Statistics Report provides information on the reads and calls CODE-1 Plus makes to the various database files and program modules during job execution. This report prints automatically when your job runs and cannot be suppressed. This report includes the following information:

Field	Description
Number of CODE-1 Plus Database Reads	Number of database reads CODE-1 Plus did to each logical file in the database.
Total CODE-1 Plus Database Reads	Total number of database reads CODE-1 Plus did to the entire CODE-1 Plus database.
Number of Database Read Requests	Number of database read requests CODE-1 Plus did to each logical file.
Total CODE-1 Plus Database Read Requests	Total number of database read requests CODE-1 Plus did to the entire CODE-1 Plus database.
Address-Match Calls	Number of records requiring address match calls, broken down by the number of records requiring 1 call, 2 calls, 3 calls, and 4 calls.
Total analyzer invocations	Number of times the CODE-1 Plus driver program called the C1ANZADR module.
ZIP Code setup operations	Number of times CODE-1 Plus determined a locality.
Match Attempts and Matches Obtained	Statistics for the different types of matches attempted and maintained (Original ZIP, city-based locality, Finance-NR-based locality, etc.).

Note: A database **read request** is a request for data that can be satisfied either with information on disk or information already in memory. A database read cannot be satisfied with the information in memory. CODE-1 Plus must access the database on disk to satisfy the read request.

Control Totals Report

The Control Totals Report provides statistics on processed, matched, and unmatched records for a job. The top of the Control Totals Report displays the CODE-1 Plus release and the vintage dates of the installed databases. This report prints automatically when your job is run and cannot be suppressed. Counts and percentages print for the following fields.

Field	Description
Input Name/Address Records Read	Number of records read from the input name-and-address file C1BMNAM.
Name/Address Records Processed	Number of records processed. If you used the Z4CHANGE option, the Bypassed by Z4CHANGE Option entry appears after the Input Name/Address Records Read, File C1BMNAM entry. The Z4CHANGE entry shows how many input records did not have to be processed based on the Z4CHANGE Master File.
Total Records for Which Address Match Attempted	<p>Number of records for which a record match was attempted against the database. The subcategories for this field are the following:</p> <ul style="list-style-type: none">• Original ZIP Code Confirmed—the input ZIP Code matched the database.• New ZIP Code Determined—the ZIP Code was changed from the input as the result of a database match.• Multiple New ZIP Codes Determined—these records were not matched because the input ZIP Code was not correct and there were multiple possible new ZIP Codes.• Original ZIP Code Retained—(No Address Match Possible)—these records were not matched, but since the input ZIP Code was a valid USPS ZIP Code, it was retained.• No ZIP Code Available—these records were not coded and the input ZIP Code could not be retained because it was invalid.

Field	Description
Total Unmatched Records	Statistics for the records that could not be matched against the USPS database, broken down by result code. This category is a breakdown of the records indicated in the last three sub-categories listed above.
Total Records Successfully Matched	Total number of records that were successfully matched and stored on the output file.
ZIP + 4 Code Stored Successfully	Number of records that were stored with valid ZIP + 4 Codes.
Carrier Route Code Stored Successfully	Number of records that were stored with valid carrier route codes.
Standard Address Stored Successfully	Number of records that were stored with valid standardized addresses.
Line of Travel Coding Attempts	Number of records for which an attempt was made to retrieve a LOT Code.
Address Match Yielding Street Alias	Number of records that were matched, and which contained a street alias.
Records Matching USPS Record Types	Number of records that were matched, broken down by USPS Record type.
Records Receiving Bnnn, Cnnn, Hnnn, and Rnnn	Number of records receiving each type of carrier route code.
PreciselyID Match fields	When the optional PreciselyID processing is enabled, the Control Totals report displays additional match statistics such as the total number of match attempts, successful and unsuccessful matches, and the number of primary matches found.

Execution Log

The Execution Log provides information on the steps that CODE-1 Plus executes when processing your name-and-address file. This report generates automatically while your job is running and cannot be suppressed. The Execution Log is helpful if your job ends by providing details on how far CODE-1 Plus processed the job got before terminating the job. If you contact Technical Support, please have this report available for reference.

Parameter Record Listing Report

The Parameter Record Listing shows all of the parameters that are used to define a particular job. The Parameter Record Listing prints automatically when a job is run and cannot be suppressed. If you need to contact Precisely Technical Support about a problem with any of your jobs, please have this report available for reference.

Analysis of Matched Records Report

The Analysis of Matched Records Report provides information on:

- Total number of records that were processed
- Number of processed records successfully matched
- Match details on input directionals, suffixes, and apartment numbers
- Quality of the input file using “Probable Correctness” values
- Combined probable correctness percentage for the entire input file

If any report field contains 0, the field does not print on the report.

Build Report

The Build Report displays the release version information for major batch programs. To generate the Build Report, define the BUILD parameter for your batch job. For more information on the BUILD parameter, please refer to the section “BUILD” in your **CODE-1 Plus Reference Guide**.

Coding by State Reports

This section provides information for the coding by state reports:

ZIP + 4 Coding by State Report

The ZIP + 4 Coding by State Report shows the results of ZIP + 4 coding for each state and provides the following information.:

Field	Description
ZIP Code Mismatch	ZIP Code could not be determined.
Insufficient Address	Not enough address information was provided.
Street Mismatch	Street name could not be determined.
House Number Mismatch	House number could not be determined.
Apartment Number Mismatch	Apartment number could not be determined.

Field	Description
Matched	Number of records matched with ZIP + 4 Codes or carrier route codes (depending on the report).
Multiple Matches	Number of records for which multiple matches were found for ZIP + 4 Codes or carrier route codes (depending on the report).
Address Information Dropped	Number of records that had address information dropped.
Probable Correctness Too High	Number of records that exceeded the maximum probable correctness values you specified for the job.
Stored	Number of records stored with ZIP + 4 Codes.
Percent Stored	Percentage of the input file stored that was ZIP + 4 coded.

Carrier Coding by State Report

The Carrier Coding by State Report shows the results of carrier route coding for each state and provides the following information:

Field	Description
ZIP Code Mismatch	ZIP Code could not be determined.
Insufficient Address	Not enough address information was provided.
Street Mismatch	Street name could not be determined.

Field	Description
House Number Mismatch	House number could not be determined.
Apartment Number Mismatch	Apartment number could not be determined.
Matched	Number of records matched with carrier route codes (depending on the report).
Multiple Matches	Number of records for which multiple matches were found for carrier route codes (depending on the report).
Address Information Dropped	Number of records that had address information dropped.
Probable Correctness Too High	Number of records that exceeded the maximum probable correctness values you specified for the job.
Stored	Number of records stored with carrier route codes.
Percent Stored	Percentage of the input file stored that was carrier route coded.

Line of Travel Coding by State Report

The Line of Travel Coding by State Report is broken down differently. After the number of records processed for each state, the report is broken down as follows:

Field	Description
State	State for which Line of Travel coding statistics are listed.

Field	Description
Number Processed	Number of records processed for the state.
ZIP + 4 Level LOT Coded	Number of records for which a LOT code was assigned at the ZIP + 4 level.
Pct of Nr Processed	Percentage of records that were LOT coded at the ZIP + 4 level.
Default LOT Coded	Number of records coded with a default LOT code.
Pct of Nr Processed	Percentage of records that were default LOT coded.
Uncoded	Number of records that were not LOT coded.
Pct of Nr Processed	Percentage of records that were not LOT coded.
Total	Total for each field on report.

Coding by List Code Reports

This section provides information for the coding by list code reports:

ZIP + 4 Coding by List Code Report

The ZIP + 4 Coding by List Code Report lists the input list code, followed by the number of input records for that code and provides the following information.

Field	Description
ZIP Code Mismatch	ZIP Code could not be determined.
Insufficient Address	Not enough address information was provided.
Street Mismatch	Street name could not be determined.
House Number Mismatch	House number could not be determined.
Apartment Number Mismatch	Apartment number could not be determined.
Matched	Number of records matched with ZIP + 4 Codes (depending on the report).
Multiple Matches	Number of records for which multiple matches were found for ZIP + 4 Codes.
Address Information Dropped	Number of records that had address information dropped.
Probable Correctness Too High	Number of records that were not stored because they exceeded the maximum probable correctness values you specified for the job.
Stored	Number of records stored with ZIP + 4 Codes or carrier route codes,
Percent Stored	Percentage of the input file stored that was ZIP + 4 coded or carrier route coded.

Carrier Route Coding by List Code Report

The Carrier Route Coding by List Code Report lists the input list code, followed by the number of input records for that code and provides the following information.

Field	Description
ZIP Code Mismatch	ZIP Code could not be determined.
Insufficient Address	Not enough address information was provided.
Street Mismatch	Street name could not be determined.
House Number Mismatch	House number could not be determined.
Apartment Number Mismatch	Apartment number could not be determined.
Matched	Number of records matched with carrier route codes (depending on the report).
Multiple Matches	Number of records for which multiple matches were found for carrier routes.
Address Information Dropped	Number of records that had address information dropped.
Probable Correctness Too High	Number of records that were not stored because they exceeded the maximum probable correctness values you specified for the job.
Stored	Number of records stored with carrier route codes.

Field	Description
Percent Stored	Percentage of the input file stored that was carrier route coded.

Line of Travel Coding by List Code Report

The Line of Travel Coding by List Code Report is broken down differently. After the number of records processed for each state, the report is broken down as follows

Field	Description
List Code	List code for which Line of Travel coding statistics are listed.
Number Processed	Number of records processed for the list code.
ZIP + 4 Level LOT Coded	Number of records for which a LOT code was assigned at the ZIP + 4 level.
Pct of Nr Processed	Percentage of records that were LOT coded at the ZIP + 4 level.
Default LOT Coded	Number of records coded with a default LOT code.
Pct of Nr Processed	Percentage of records that were default LOT coded.
Uncoded	Number of records that were not LOT coded.
Pct of Nr Processed	Percentage of records that were not LOT coded.

Field	Description
Total	Total for each field on report.

Coding by 3-Digit ZIP Code Reports

This section provides information for the Coding by 3-Digit reports:

ZIP + 4 Coding by 3-Digit ZIP Code Reports

The ZIP + 4 Coding by 3-Digit ZIP Code Report provides the following information.

Field	Description
ZIP Code Mismatch	ZIP Code could not be determined.
Insufficient Address	Not enough address information was provided.
Street Mismatch	Street name could not be determined.
House Number Mismatch	House number could not be determined.
Apartment Number Mismatch	Apartment number could not be determined.
Matched	Number of records matched with ZIP + 4 Codes.

Field	Description
Multiple Matches	Number of records for which multiple matches were found for ZIP + 4 Codes.
Address Information Dropped	Number of records that had address information dropped.
Probable Correctness Too High	Number of records that were not stored because the records exceeded the maximum probable correctness values specified for the job.
Stored	Number of records stored with ZIP + 4 Codes.
Percent Stored	Percentage of the input file stored that was ZIP + 4 coded.

Carrier Coding by 3-Digit ZIP Code Reports

The Carrier Coding by 3-Digit ZIP Code Report provides the following information.

Field	Description
ZIP Code Mismatch	ZIP Code could not be determined.
Insufficient Address	Not enough address information was provided.
Street Mismatch	Street name could not be determined.
House Number Mismatch	House number could not be determined.
Apartment Number Mismatch	Apartment number could not be determined.

Field	Description
Matched	Number of records matched with carrier route codes.
Multiple Matches	Number of records for which multiple matches were found for carrier route codes.
Address Information Dropped	Number of records that had address information dropped.
Probable Correctness Too High	Number of records that were not stored because the records exceeded the maximum probable correctness values specified for the job.
Stored	Number of records stored with carrier route codes.
Percent Stored	Percentage of the input file stored that was ZIP + 4 coded or carrier route coded.

Line of Travel Coding by 3-Digit ZIP Code Report

The Line of Travel Coding by 3-Digit ZIP Code Report provides the following information.

Field	Description
3-Digit	3-Digit code for which Line of Travel coding statistics are listed.
Number Processed	Number of records processed for the 3-Digit ZIP Code.
ZIP + 4 Level LOT Coded	Number of records for which a LOT code was assigned at the ZIP + 4 level.

Field	Description
Pct of Nr Processed	Percentage of records that were LOT coded at the ZIP + 4 level.
Default LOT Coded	Number of records coded with a default LOT code.
Pct of Nr Processed	Percentage of records coded with a default LOT code.
Uncoded	Number of records that were not LOT coded.
Pct of Nr Processed	Percentage of records that were not LOT coded.
Total	Total for each field on report.

Processing Summary Reports

The Processing Summary reports show—by state, list code, or 3-digit ZIP Code—totals for the following categories:

- Records Processed—number of records processed for this job
- Address Mismatches—number of records for which no address could be determined
- Multiple Matches—number of records for which multiple matches were found
- Unique Matches—number of records for which there was only a single, unique match determined
- Number of ZIP Codes Stored—number of records that were stored with ZIP Codes
- Percentage of ZIP Codes Stored
- Number of Records Stored with ZIP + 4 Codes
- Percentage of Records Stored with ZIP + 4 Codes—Percentage of total number of records stored with ZIP + 4 Codes

- Number of Records Stored with Carrier Route Codes
- Percentage of Records Stored with Carrier Route Codes
- Number of Records Stored with Standardized Addresses
- Percentage of Records Stored with Standardized Addresses
- Number of Records Stored with City and State—Number of records stored with matched city and state information
- Percentage of Records Stored with City and State

Delivery Point Validation Processing Summary Report

This report shows you statistics about processed, matched, and unmatched records for a job. This report is printed automatically when your job is run. You cannot turn this feature off.

Delivery Point Validation Processing by List Code Report

This report shows you statistics about processed, matched, and unmatched records for a job. This report is printed automatically when your job is run; you cannot turn this feature off.

Residential Delivery File Build Report

You will find the following information on this report:

- Parameter given
- Control totals for your RDI File build job

Residential Delivery File Build Execution Log

You will find the following information on the execution log:

- Date and time of the RDI File build
- Number of 9-digit input records
- Number of 11-digit input records

National Deliverability Index (NDI) Report

The National Deliverability Index System (NDI) measures and improves address quality through seven quality indicators. The NDI Report shows how many records fulfill each criteria required for each quality indicator. The categories are represented by the number of addresses:

- Matched and standardized against the ZIP + 4 file
- Containing apartment numbers
- Containing rural route and box number information
- Containing correct 5-digit ZIP Codes
- Containing carrier route codes

USPS Form 3553 (CASS Summary Report)

The USPS Form 3553 (CASS Summary Report) is a facsimile of the Postal Form 3553. CODE-1 Plus generates this form automatically when you are using a CASS-certified configuration. The USPS requires this form to verify CASS certification.

- Section **A** contains the CASS-certified vendor name (Precisely), software name, release number, and the configuration used. For Z4CHANGE and LOT processing, the form contains the Z4CHANGE and LOT vendor name, Z4CHANGE and LOT software name, release number, and the configuration used.

- Section **B** of the form contains information about your name-and-address list including the date you processed your list against the Master file, Z4CHANGE option, and LOT database. It also contains the date (month and year) of the ZIP + 4 (Master file), Z4CHANGE, and LOT databases. Additional list information is also provided including the total number of records processed.
- Section **C** contains information about your output file including the number of records ZIP + 4 coded, delivery point coded, 5-digit ZIP coded, carrier route coded, LOT coded, Z4CHANGE processed, and the valid dates (from-to) for the file.
- Section **D** contains mailer information.
- Section **E** contains the Qualitative Statistical Summary information for high rise, rural route, LACS^{Link}, EWS, and Suite^{Link} data.

Note: Pages 2 of the USPS Form 3553 (CASS Summary Report) contains detailed descriptions of each field on the form.

For more information, please see <http://about.usps.com/forms/ps3553.pdf>.

11 - Getting Started With Interactive Processing

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Getting Started With the Interactive System

This chapter describes the CODE-1 Plus interactive address matching and database inquiry functions. The CODE-1 Plus Interactive System is an environment where you can match and correct addresses online through one easy-to-use screen. This screen enables you to use the two main functions, Address Matching and Database Inquiry, and a secondary function that enables you to correct uncoded records. (You must implement the user-exit G1CPBNC to correct uncoded records interactively.) To implement the user-exit G1CPBNC, refer to [Correcting Uncoded Records](#).

Note: To minimize maintenance, the interactive screens in this chapter do not display the database version and the date stamp. We also use “__ of __” to represent the screen currently displayed, instead of “1 of 62,381,” for example.

Note: The CODE-1 Plus Interactive System does not support Auxiliary File/EWS processing.

Address Matching Function

The interactive address matching function enables you to:

- Match a single input address against the master file
- Analyze return codes to determine actions that were taken to attempt a match
- Detect the types and quantities of problems encountered in an input address
- Control the closeness (“tightness” or “looseness”) of address matches

For each match attempt, CODE-1 Plus displays return codes that indicate the success or reason for failure of the attempt. You can view these return codes in code or expanded English format.

In addition to the return codes, CODE-1 Plus shows you, for each match attempt, parsed address elements and Delivery Sequence Footnotes (DSF² codes).

Geographic Coding

The address matching function provides access to the Geographic Coding Information screens. Please refer to the User’s Guide that you received with your Geographic Coding software for details about Geographic Coding Plus.

Note: To access the Geographic Coding Information screens, you must purchase and install the Precisely Geographic Coding Plus software.

Database Inquiry Function

The database inquiry function lets you browse the contents of the CODE-1 Plus database. Using this feature, you can look up houses, apartments, and firms on a given street, in a particular city. You can display and analyze the following information for each city in the CODE-1 Plus database:

- City name
- Cities within a state
- Cities within a ZIP Code
- ZIP Codes in a city
- Streets within a city
- Streets within a locality
- Streets within a ZIP Code
- House ranges on a street
- Apartment ranges on a street range
- Firm names within a street range

Database Expiration and Incompatibility

The interactive matcher ceases to function in accordance with the Domestic Mail Manual (DMM) A960 matrix. The interactive system inquiry area, however, remains available even after the interactive matcher expires. In this case, the following message will be displayed on the prompt line above the function key descriptions:

```
CODE-1 Plus DATABASE IS EXPIRED
```

Alternatively, if the CASS cycle date has passed, the following message displays at the prompt:

```
CODE-1 Plus DATABASE CASS CYCLE IS EXPIRED
```

The interactive system validates the release of the database against the release of the software. If the releases are incompatible, the following message will appear when you enter the CODE-1 Plus interactive transaction code:

```
CODE-1 Plus PROGRAM ERROR, RETURN CODE=ICPT INCOMPATIBLE
```

```
DATABASE FOUND
```

In this case, neither the inquiry nor the match process will be accessible.

Expiration of Delivery Point Validation (DPV) Processing

The DPV option will stop working at the end of the fourth month from the release of the database.

If you have an expired DPV database, this message will appear:

```
DELIVERY POINT VALIDATION SUPPRESSED DUE TO DATABASE
```

```
EXPIRATION DATE CHECK
```

Correcting Uncoded Records Function

When you run a batch job in CODE-1 Plus, you can generate an uncoded records output file (C1BMNCO). This file contains records with valid ZIP Codes, but for some reason, the records did not match against the database. With a supplied user-exit, you can correct these records in the CODE-1 Plus Interactive screen. You display an uncoded record in the input area, correct the record, write the corrected record to a corrected output file, and then display the next uncoded record. For more information, refer to [Correcting Uncoded Records](#).

Navigation Function

The navigation function coordinates the match and inquiry functions to position the inquiry portion of the split screen format as close as possible to the point of match failure on a non-matched address. Navigation does not change the display on a matched address; it is geared to react to the matcher's non-space return codes to drill down into the database as far as possible.

For example, a house range mismatch generally will result in the inquiry half of the screen being positioned at the house range on the street entered on the top half of the screen. If the street is misspelled, however, the position will be at the same street name entered on the match portion of the screen. The purpose of this process is to get as close as possible to a correct address without having to drill through apparently correct levels of the database.

The Navigate (Nav) toggle command turns navigation on or off. Navigation is only available in split screen processing (since a non-matched address is required to activate the function) and can be used in concert with the UR (batch not coded) function. For more information on the commands available in interactive processing, refer to [Command Field](#).

CODE-1 Plus Interactive System Screen

The Interactive CODE-1 Plus System screen includes the address matching function on top and the database inquiry function on the bottom.

The screenshot shows the 'CODE-1 Plus Coding System' interface. It is divided into several sections: 'Input Fields' for entering address information, 'Match Results' for displaying standardized addresses, 'Command Field' for entering system commands, 'Database' for displaying a list of cities, and 'Function Keys' for navigating between different functions. The 'Database' section contains a table of city information.

LN	City	State	ZIP Range	Type	URB	Unique-ZIP
1	A A R P	CA	90848	V		
2	A A R P INS	PA	19137	V		Y
3	A A R P PHARMACY	CA	90848	V		Y
4	A A R P PHARMACY	CT	06167	V		Y
5	A C NIELSEN	TX	79966-79974	V		Y
6	A H MCCOY FEDERAL BLDG	MS	39269	V		
7	A M F GREENSBORO	NC	27425	V		
8	A M O R C	CA	95191	V		Y

Below the table, it states: 'The match settings have been changed.' and lists function keys: 1=Help, 2=ZC, 3=Quit, 4=SC, 5=CZ, 8=Down, 9=Mat, 10=Flip.

Interactive CODE-1 Plus System Screen Components

You can enter an address and attempt a match, or display database information.

- **Input Fields**—Enter the address that you want to match.
- **Match Results**—CODE-1 Plus returns the standardized address.
- **Command Field**—Enter screen commands.
- **Database Inquiry**—The first database inquiry screen displays an alphabetical list of cities in the database.
- **Function Keys**—Access other functions for address matching or database inquiry components.

Online Help Facility

The CODE-1 Plus Interactive System has an extensive help facility. Help is available on three levels:

- Context sensitive help
- System Tutorial
- List of Commands

To access the online help facility from any screen in the Interactive CODE-1 Plus System:

1. Enter **Help** in the **Command** field or press function key **F1** or the **Help** key.
2. The online help facility displays a menu, and you can choose to see the tutorial, a list of all valid commands, or context sensitive help on the screen that was displayed when you accessed the online help facility.
3. To exit the help facility, press function key **F10** or enter **X** in the **Selection** field.

Address Matching

To match an address, follow the steps below.

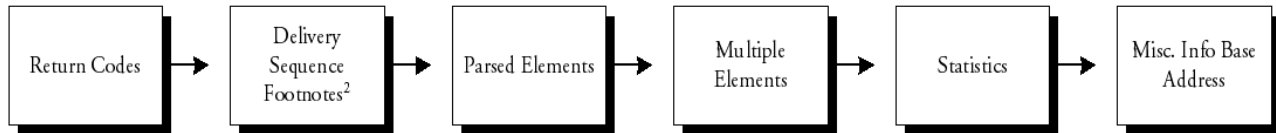
1. Move your cursor to the top of the screen using the **Tab** key, arrow keys, or **Field Exit** key.
2. Enter any firm name, primary and secondary address lines, city, state, and/or ZIP Code.
3. Press **Enter**.
4. CODE-1 Plus searches the database to find an address that matches the one you entered.
5. If a match is found, the standardized address line and the standardized city/state/ZIP Code line appear for you on the top half of the screen.
6. You can display other match result information by entering **RC** (return codes) or **MAT** in the **Command** field, or pressing **F9**.

Scrolling Through the Match Results Screens

There are six screens of match results in the CODE-1 Plus Interactive System. Each screen shows you different information about your match attempt. These screens are the following:

- **RC—Return Codes** screen
- **DS—Delivery Sequence Footnotes²** screen
- **PE—Parsed Elements** screen
- **ME—Multiple Elements** screen
- **ST—Statistics** screen
- **DI—Miscellaneous Information/Base Address** screen.

You can access these screens from anywhere in the system by typing the screen's 2-character code in the **Command** field. You can display these screens sequentially in the order shown below with the **DOWN** command or **F8** or **ROLL UP** keys and the **UP** command or the **F7** or **ROLL DOWN** keys.



Sequential Order of CODE-1 Plus Interactive System Screens

In addition to the six match results screens, there are three other screens that support the address matching function. These screens follow:

- ER—**Expanded Return Codes** screen shows you English descriptions of the return codes.
- MS—**Match Settings** screen enables you to change the settings for the match algorithms to control the strictness of the match attempt.
- GC—**Geographic Codes** screen enables you to see Geographic Coding Results for your address (if the Geographic Coding System is installed).
- DB—Database Commands displays the information for your database, including software release and the expiration date of your databases.

To view one of the above screens, type its 2-character code in the **Command** field and press the Enter key.

Note: If you change to one of these match results screens, and attempt another match, the **Return Codes** screen is not re-displayed; the screen that is currently shown remains until you move to another screen. To return to the **Return Codes** screen, enter **RC** in the **Command** field.

Database Inquiry

The bottom half of the Interactive CODE-1 Plus screen contains the first database inquiry screen. The database inquiry function supports the following screens:

- AH—Apartments at a House Range
- CS—Cities in a State
- CZ—Cities in a ZIP Code
- CI—City Information
- FM—Firms on a Street

- HS—Houses on a Street
- SC—Streets in a City
- SL—Streets in a Locality
- SZ—Streets in a ZIP Code
- GEO—Geographic Coding Interface
- ZC—ZIP Codes in a City.

To make any database inquiry screen take up all of the space on the screen:

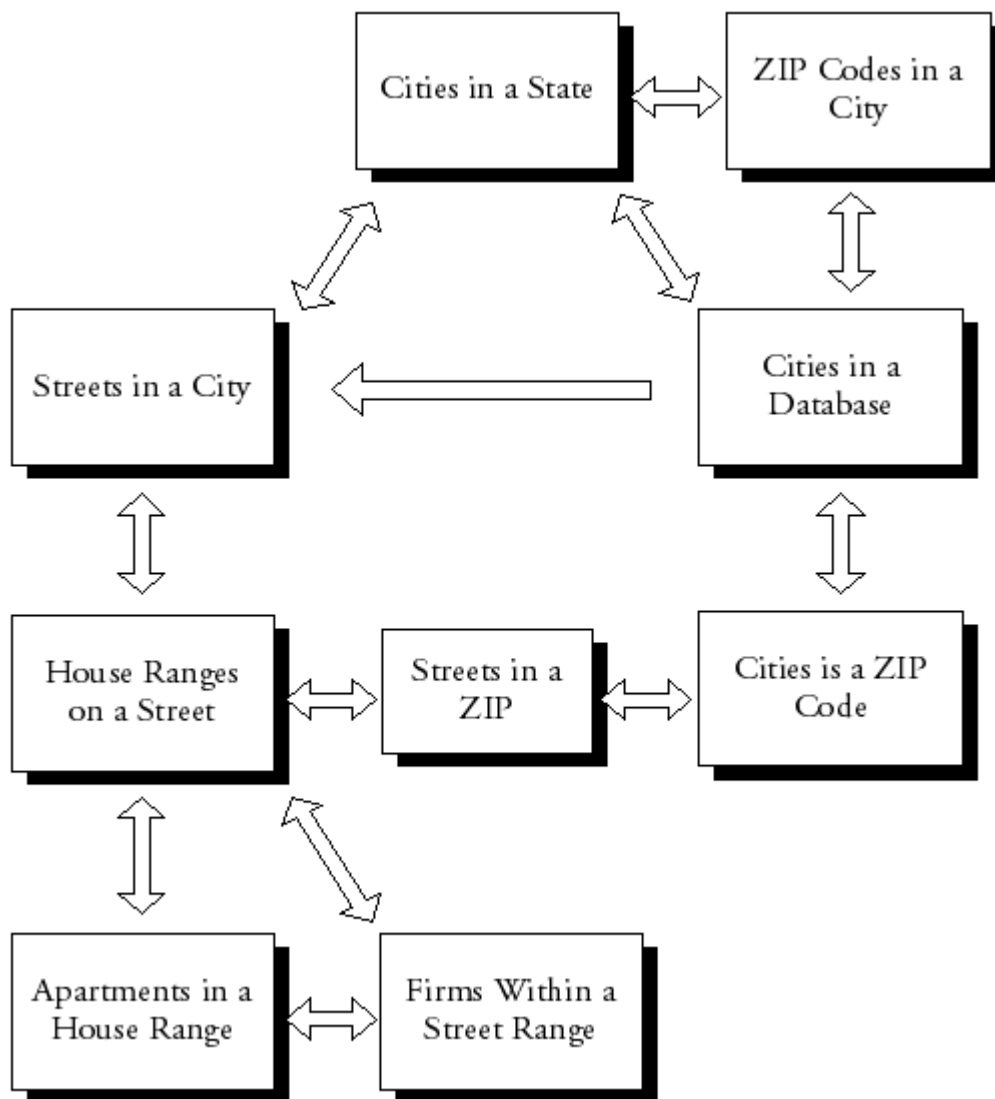
1. Type **FLIP** in the **Command** field or press function key **F10**.
More lines are available to display additional information stored in the database.
2. To restore the screen to the original display, enter **FLIP** again in the **Command** field.

Navigating Through the Screens

You can access the CI, CS, CZ, and SZ database inquiry screens from anywhere in the system by typing the screen's 2-character code in the **Command** field. Note that to access:

- The Cities in a State screen, type **CS** followed by a 2-character state code in the Command field.
- The Cities in a ZIP Code screen, type **CZ** followed by a 5-digit ZIP Code (or 2-digit line number if you are on **Cities in a State** or database screens).
- The Streets in a ZIP Code screen, type **SZ** followed by a 5-digit ZIP Code (or 2-digit line number if you are on Cities in a ZIP Code screen).

You can scroll through data on a specific screen as shown in the figure below with the **DOWN** command or **F8** or **ROLL UP** keys and the **UP** command or the **F7** or **ROLL DOWN** keys.



Screen Order in CODE-1 Plus Interactive System

Moving to a Line on a Screen

To position the data on the screen to a specific spot alphabetically:

1. Type an **L** (short for locate) in the **Command** field.
2. Then type the search string and press the **Enter** key.

For example, if you wanted to position the list to Lanham while displaying a Cities screen, you would enter **L LANHAM** in the **Command** field. The first city that starts with the letters L-A-N-H-A-M would become the first city displayed.

Displaying Data about a Database Entry

To display data for any database line on the screen, use one of the following methods. All methods produce the same result.

- First, in the **Command** field, you can type the 2-character command and the appropriate line number. For example, if the city of Lanham, MD is the second city displayed, and we want to display all of the streets in Lanham, MD, we would:

Type **SC 2** (streets in the city on line 2) in the **Command** field.

All the streets in the city of Lanham appear.

- Most 2-character screen abbreviations (like SC above) are assigned to function keys on the current screen. Refer to the display line on the bottom of the screen for the corresponding function keys. If you want to use a function key to access data instead of typing the 2-character code, you can use one of the two methods described below. To display the streets in Lanham, Maryland again:

Type **2** in the **Command** field and press the function key **F4**.

or

Position the cursor on the second line of the display (the line with Lanham, MD) and press **F4**.

Querying the Database

The following steps clarify the concepts presented above.

1. Start at the first database inquiry screen.
2. Enter **FLIP** in the **Command** field and press Enter.
3. Enter **L LANHAM** in the Command field. The screen changes to display only database inquiry without address matching.
4. Enter **SC 2** in the Command field and press Enter.

Note: You could also enter just **SC**. The line number defaults to 1, if no line number is entered in the Command field.

The cursor moves to the **Streets in a City** screen for the city on the first line of the display (in this case, Lanham MD).

5. Enter **DOWN** in the **Command** field and press Enter or press **F8** to see the next display of streets in Lanham, MD. The screen appears with all the streets in Lanham, Maryland.

Note: To combine a display command and a locate command, you can enter the display command, followed by the line number for the display command, followed by the locate string. For example, if your screen displayed the cities in the database, positioned with LANHAM, MD as line 4, and you wanted to see all of the streets in LANHAM starting with PARLIAMENT PL, you would enter SC 4 PARLIAMENT. The **Streets in a City** screen would be displayed, and PARLIAMENT PL would be the second street displayed.

An Example Work Session

The remainder of this chapter is devoted to an example of how to use the interactive functions to correct problem addresses. The first step is to access the interactive matching function and enter an address. The address will not match, so we use the database inquiry to see if our “detective” skills enable us to find the address. Once we find an address, we return to the address matching function to look at the results of a match.

The following address is used as input:

LOCUS INC2560 HUNTJEFFERSON VA

You will follow the steps below to correct your input address:

1. Access the CODE-1 Plus Interactive System.
2. Attempt to match a questionable address using different matching algorithms.
3. Browse the postal database to determine the correct address.
4. Successfully match the corrected input address, thereby producing a ZIP + 4 Code, parsed address elements, and output return codes.
5. Display geographic codes for the address.

Note: To access the Geographic Coding System screen, you must have purchased and installed the Precisely Geographic Coding Plus.

Step 1. Accessing the Interactive System

To start the CODE-1 Plus Interactive system:

1. Enter command CALL G1@@pgms/G1mm01.

2. Select 5 for CODE-1 Plus.
3. Press F8 from the Work With Jobs screen.

OR

Add the global, product, and database libraries to your library list and type CALL G1CP on the IBM i command line.

The CODE-1 Plus Interactive System appears on your screen.

Step 2. Matching an Address

At this point, you can enter an address for a match or search the database for specific information. For the example, we enter an address match attempt.

1. Type the address in question and press Enter.

```

CODE-1 Plus coding System
-----
Firm Name: LOCUS INC                      Firm: M  D/suf: M
Secondary Addr:                          ST: M  Vcity: S
Primary Addr: 2650 HUNT                   correct ZIP: Y
City, ST: JEFFERSON VA                   Mixed Case: Y
ZIP Code:                               Mult Secondary: Y
Urb Name:                               Override City: Z
Matched Addr:                           CRRT:
City,State ZIP:                         DPBC:
-----
Command:                               Nav DPV  _ of _
LN  City                               State  ZIP Range  Type  URB  Unique-ZIP
1  A A R P                             CA     90848      V      Y
2  A A R P INS                          PA     19187      V      Y
3  A A R P PHARMACY                     CA     90848      V      Y
4  A A R P PHARMACY                     CT     06167      V      Y
5  A C NIELSEN                          TX     79966-79974 V      Y
6  A H MCCOY FEDERAL BLDG               MS     39269      V
7  A W F GREENSBORO                     NC     27425      V
8  A M O R C                             CA     95191      V      Y
The match settings have been changed.
1=Help  2=ZC  3=Quit  4=SC  5=CZ  8=Down  9=Mat  10=Flip

```

2. CODE-1 Plus attempts to match the address, but is unsuccessful (no match address or City/State/ZIP Code line is displayed). Next, review why a match was not found.
3. To display the **Return Codes** screen, type **RC** in the Command field and press Enter. CODE-1 Plus codes the example address. Return codes appear on the screen.
4. To change to the database inquiry function, type **INQ** in the Command field and press Enter.

Step 3. Querying the Database

The lower half of the screen changes and displays the list of cities in the database.

1. In the **Command** field, type **CS VA JEFFERSON** and press **Enter**. The list of cities in Virginia is repositioned with Jefferson Manor, ZIP Code 22303 at the top of the list. This seems close

enough to our original address that it bears further investigation. At this point, Jefferson Manor is a secondary city name. The primary city (i.e., the USPS-preferred city name) is obtained through the ZIP Code.

```

CODE-1 Plus Coding System
-----
Firm Name: LOCUS INC                      Firm: M D/Suf:M
Secondary Addr:                          St: M vcity:S
Primary Addr: 2560 HUNT                   Correct ZIP Y
City, ST: JEFFERSON VA                   Mixed Case: Y
ZIP Code:                               Mult Secondary: Y
Urb Name:                               Override City: Y
Matched Addr:                           CRRT:
City,State ZIP:                         DPBC:
-----
Command: cz                               Nav Off  ___ of ___
Cities in Virginia
LN  City      State  ZIP Range  Type  URB  Unique-ZIP
1  JEFFERSON  VA    22303     S
2  JEFFERSON  VA    22724     P
3  JENKINS BRG  VA    23399     P
4  JENKINS BRIDGE VA    23399     P
5  JERSEY      VA    22481     P
6  JETERSVILLE VA    23083     P
7  JEWELL RIDGE VA    24622     P
8  JEWELL VALLEY VA    24622     S

1=Help  2=ZC  3=Quit  4=SC  5=CZ  6=Back  7=Up  8=Down  9=Mat  10=Flip

```

2. In the **Command** field, type **CZ** and press **Enter**. The Cities in ZIP Code screen appears. Notice that there are two cities for this ZIP Code. Alexandria has a city type of “Primary,” and Jefferson Manor has a city type of “Secondary.” Alexandria is the USPS-preferred city name for the ZIP Code 22303.
3. Now, see if there is a street called Hunt in this ZIP Code. To display all of the streets in the ZIP Code range for the first city (Alexandria), in the **Command** field type **SZ HUNT** and press **Enter**.
4. The Streets in ZIP Code screen appears so that “HUNT” would have been the first street on the screen if it existed. Notice that there is no Hunt Street, but there is a Huntington Avenue. This bears further investigation.
5. In the **Command** field, type **HS 3 2560** and press **Enter**.
6. The list is positioned so that the house range containing 2560 is at the top of the list. Notice that 2560 Huntington Avenue is a high rise house type.
7. In the **Command** field, type **FM 3** and press **Enter**.
8. The **Firms on a Street** screen appears. The screen displays Locus Inc. located at 2560 Huntington Avenue, apartment number 302. The search is complete.

Step 4. Matching an Address—Second Attempt

Now that there is an accurate address, enter it interactively and look at the match return codes. The first thing to do is change the matching algorithm settings to “tight” from the default of medium.

1. In the **Command** field, type **MS** and press **Enter**.
2. The **Match Settings** screen appears. Type T for each of the matching algorithms and press Enter. The Match Settings screen disappears, and the Firms in a Street screen appears again. A message appears at the bottom of the screen telling you that the settings were changed.
3. Type the correct address matching fields and press **Enter**.
4. CODE-1 Plus matches the address and shows the matched address.
5. To review the return codes for the match, in the **Command** field, type **RC** and press **Enter**.
6. The **Return Codes** screen appears. Scroll through to see the other match results screens. In the **Command** field, type **DOWN** or press **F8**.
The **Delivery Sequence Footnotes** screen displays, showing DSF codes that applied to this match attempt.
7. Continue to type **DOWN** in the **Command** field, or press **F8**.
The Parsed Elements screen appears.
8. Type **DOWN** in the **Command** field, or press **F8**.
The Multiple Elements screen appears.
9. Type **DOWN** in the **Command** field, or press **F8**.
The Statistics screen appears.
10. Type **DOWN** in the **Command** field, or press **F8**.
The Miscellaneous Address Values screen appears.
11. To exit from the Interactive System, type **QUIT** in the **Command** field or press F3.

Step 5. Geographic Coding

In addition to address matching, you can return geographic coding information about the address. If you enter a match attempt, and then access the Geographic Coding Interface screen, the geographic match results appears for the ZIP Code and ZIP + 4 Code from the match attempt. If you do not enter a match attempt before accessing the Geographic Coding Interface, enter the ZIP Code and ZIP + 4 Codes directly on the screen.

Note: To access the Geographic Coding interface screen, you must have purchased and installed Precisely's Geographic Coding Plus.

1. In the **Command** field, type **GEO** and press **Enter**. The first Geographic Coding Interface screen appears.

2. To display the second Geographic Coding Interface screen, press **F8**. The second Geographic Coding Interface screen appears.
3. Press **F7** once to return to the top of the Geographic Coding Interface screen, and then press **F10** in the **Command** field.

Correcting Uncoded Records

If you implement the G1CPBNC user-exit program, you can correct uncoded records from the G1CPBNC output file. To correct uncoded records using the CODE-1 Plus Interactive system, use two commands: **UR** (User Read) and **UW** (User Write). These commands are described below:

To correct uncoded records from the C1BMNCO output file, follow the steps below:

1. Start at the **CODE-1 Plus Interactive System** screen.
2. Type **UR** in the **Command** field.
An uncoded address appears in the input area.
3. You can use any address matching or database inquiry functions necessary to find a match for this address.
4. Once the uncoded address is matched to the database and corrected, type **UW** in the **Command** field. The corrected address is written to an output file.
5. Repeat steps 2 through 4 until all the records in the uncoded records output file are corrected.

Note: For information on the G1CPBNC program, refer to [Batch Uncoded Records Interface \(G1CPBNC\)](#).

Interactive Screen Reference

This section provides a reference for the CODE-1 Plus interactive screens. Each screen is presented, along with its fields and function keys.

Command Field

There is one field that appears on every screen in the Interactive CODE-1 Plus System: the **Command** field. This field enables you to move gracefully through address match attempt results as well as database inquiry data. The following table lists all of the commands that you can enter in the **Command** field. In addition, the table lists alternate actions you can take to accomplish the same results as the command. For each command listed, the underlined portion is all that is required for entry (you can enter the entire command string, however).

Command	Description	Alternate Method
General Commands		
BOTTOM	Move to the bottom of the data. In the address match function, this command brings you to the Base Address/Dropped Information screen. In the database inquiry function this command repositions the list of data to the last entry.	None.
DOWN	Move down one display of data. In the address match function this command moves you to the next match results screen. In the database inquiry function this command repositions the list of data down one display. NOTE: If the cursor is placed on a specific line, "DOWN" will result in that line appearing as the first displayed line on the screen.	Press F8F8 with a number between 1 and 9998 on the command line will scroll down that number of lines.
EXTEND	Allows you to override database expiration, so you can match interactively with an expired database. NOTE: You must use the "EXTEND" command each time an expired database is identified by the software initialization.	None.

Command	Description	Alternate Method
FLIP	Flip the screen from the combined functions to the zoomed database inquiry function or from the zoomed database inquiry function to the combined functions, whichever is appropriate.	Press F10.
HELP	Access the online help system.	Press F1.
Right	Scroll right to see more of the firm/alias name on the Houses on a Street screen.	None.
Left	Scroll left to see first part of firm/alias name on the Houses on a Street screen.	None.
QUIT	Exit from the Interactive CODE-1 Plus System.	Press F3.
TOP	Move to the top of the data. In the address match function this command brings you to the Return Code screen. In the database inquiry function, this command repositions the list of data to the first entry.	None.
UP	Move up one display of data. In the address match function this command moves you to the previous match results screen. In the database inquiry function this command repositions the list of data up one display. NOTE: If the cursor is placed on a specific line, "UP" will result in that line appearing as the last displayed line on the screen.	Press F7F7 with a number between 1 and 9998 on the command line will scroll up that number of lines.

Customizing Interface Commands

Command	Description	Alternate Method
ADMIN	Go to the Administration Sign-on screen. Can be called from the split match/inquiry or full (flip) screens.	None.
NAVIGATE	Toggle navigation mode on and off. Positions inquiry screen as close as possible to the lowest level of match success on a non-matched address.	None.
DPV	Toggle DPV mode on and off. When turned on you will be able to do Delivery Point Validation processing.	On the Interactive Customization Screen, you can enter blank or x under Perform DPV Process.
DPVKEY	Displays the Seed Code of the DPV seed record encountered which disabled DPV processing. You will need to be provide this Seed Code to Precisely before you can receive another permanent License Management key to continue your DPV processing.	None.
DPVZAP	Initializes the customization area that contains the Seed Code. This does NOT inhibit DPV processing.	None.
LOT	Toggle LOT mode on and off. When turned on you will be able to do Line of Travel matching.	LTO
LTO	Toggle LOT mode on and off. When turned on you will be able to do Line of Travel matching.	LOT
RDI	Toggle RDI mode on and off. When turned on you will be able to do Residential Delivery File matching	RDI

Command	Description	Alternate Method
Database Inquiry Command		
AH <line number>	Move to the Apartments at a House Range screen for the house range displayed on line <line number>. This command is only valid from the Houses on a Street screen.	Type the desired line number in the Command field and press F4.orPosition your cursor on the desired line and press F4.
ALIAS <line number>	Display the base street name for the alias street listed on line <line number>. For the Apartments at a House Range screen and Firms on a Street screen only.	Type the desired line number in the Command field and press F2.orPosition your cursor on the desired line and press F2.
BACK	Return to the previous database inquiry level. (For example, if you were at the Streets in a City screen, this command would take you back to the Cities in the Database screen.)	Press F6.
CI <city>	Go to the City Information screen.	None.
CS <state abr.>	Go to the Cities in a State screen for the two character state abbreviation that is entered as <state abr.>.	None.
CZ <line number> or CZ <ZIP Code>	Move to the Cities in a ZIP Code screen for the ZIP Code that is displayed on line <line number>. or Move to the Cities in a ZIP Code screen for the ZIP Code entered as <ZIP Code>.	Type the desired line number in the Command field and press F5.orPosition your cursor on the desired line and press F5.

Command	Description	Alternate Method
DB	Display the information for your database, including software release and the expiration date of your databases.	None.
FM <line number>	Move to the Firms on a Street screen for the street name or house range displayed on line <line number>. This command is only valid from the Houses on a Street, or Apartments at a House Range screens.	Type the desired line number in the Command field and press F5.orPosition your cursor on the desired line and press F5.
HS <line number>	Move to the Houses on a Street screen for the street name that is displayed on line<line number>. This command is only valid from the Streets in a City or Streets in a ZIP Code screens.	Type the desired line number in the Command field and press F4.orPosition your cursor on the desired line and press F4.
LOCATE <string>	Generally positions the database inquiry to the first entry that starts with <string>. NOTE: If there are multiple cities with the same name, they will be listed by finance number, highest to lowest.	None.
MATCH	Go to the address match function. (The match results screen that appears when you access the database inquiry function re-appears.)	Press F9.
SC <line number>	Move to the Streets in a City screen for the city name that is displayed on line <line number>. This command is only valid from the Cities in the Database screen.	Type the desired line number in the Command field and press F4.orPosition your cursor on the desired line and press F4.
SL <line number>	Display all streets in the city locality displayed on line <line number> on the Streets in a City screen.	Type the desired line number in the Command field and press F4.orPosition your cursor on the desired line and press F4.

Command	Description	Alternate Method
SZ <line number>	Move to the Streets in a ZIP Code screen for the ZIP Code that is displayed on line <line number>. This command is only valid from the Cities in a ZIP Code screen.	Type the desired line number in the Command field and press F4.orPosition your cursor on the desired line and press F4.
SZ <ZIP Code>	Move to the Streets in a ZIP Code screen for the ZIP Code entered as <ZIP Code>	None.
ZC <line number>	Display all ZIP Codes for the city locality displayed on line <line number> on the City Information and Cities in a State screens.	Type the desired line number in the Command field and press F2.orPosition your cursor on the desired line and press F2.

Address Match Commands

INQUIRY	Go to the database inquiry function. If you had previously used the database inquiry function during this session, the screen that appeared when you left the database inquiry function reappears.	Press F9 .
AS	Display address stack entries for the address you entered.	None.
ASM	Turn on or off All Street Matching function.	
DB	Display current CODE-1 Plus database vintage and expiration date.	None.
ESM	Turn on or off Enhanced Street Matching function.	None

Command	Description	Alternate Method
SUITE	Invokes Suite ^{Link} processing.	None
LACS	Invokes LACS ^{Link} processing.	None
LTO	Invoke Line of Travel processing.	None
RC	Go to the Return Codes screen.	None.
DS	Go to the Delivery Sequence Footnotes screen.	None.
PE	Go to the Parsed Elements screen.	None.
ME	Go to the Multiple Elements screen.	None.
ST	Go to the Statistics screen.	None.
DI	Go to the Miscellaneous Address Values screen.	None.
ER	Go to the Expanded Return Codes screen.	None.
GC	Go to the Geographic Coding Information screen. This command is only valid if you have Geographic Coding Plus installed.	None.
MS	Go to the Match Settings screen, and unprotect the match control fields on the Address Match screen.	Press F4.

Command	Description	Alternate Method
REFRESH	Clear all fields on all address match function screens.	Press F5.

Using Concatenated Commands

You can concatenate commands at the command line or the initial G1CP transaction in CICS. A combination of the primary screen commands CI, CS, CZ, or SZ; a locate command; and “FLIP” can be concatenated, or delimited by the semicolon (;) character. From a blank CICS screen, the following string would produce a full screen display positioned at “Baltimore” on a “cities in state” screen (with the state of Maryland):

```
G1CP, CS MD;L BALTIMORE;FLIP
```

This command is separated from the transid by a comma, and semicolons delimit the portions of the command string. From the command line on any split screen, the same result would be achieved by the following command:

```
CS MD;L BALTIMORE;FLIP
```

If this command were entered on a full inquiry screen display, the final result would be a split screen (match and inquiry) display.

Function Keys

There are certain environmental considerations for the function keys that appear on the screens in this chapter. These screens are shown as they appear under CICS, IMS, or Unix.

Function Key	Name	Description
F1	HELP	Obtain online help.
F2	ZC	List ZIP Codes in City screen.

Function Key	Name	Description
	ALIAS	Show the base street name for the house range shown.
F3	QUIT	Exit from the Interactive CODE-1 Plus System.
F4	SC	Go to the Streets in a City screen.
	MS	Go to the Match Settings screen.
	SZ	Go to the Streets in a ZIP Code screen.
	AH	Go to the Apartments on a Street screen.
	HS	Go to the Houses on a Street screen.
F5	CZ	Go to the Cities in a ZIP Code screen.
	RE	Refresh (erase) all of the input and output data from the screen.
	FM	Go to the Firms on a Street screen.
	SAVE	Save current entries after validation. Remain on screen after save.
F6	GEO	Go to the Geographic Coding Interface (you must have purchased and installed Geographic Coding Plus separately).

Function Key	Name	Description
	BACK	Return to the previous screen.
F7	UP	If the top of the list of DSF ² codes is displayed, return to the previous match results screen. If the top of the list of DSF ² codes is not currently displayed, page up the list of codes.
F8	DOWN	Go to the next screen.
F9	MAT	Go to the Return Codes screen.
	INQ	Go to the database inquiry function.
	RESET	Restore screen values to current database entries (at last update to customization file).
F10	FLIP	Expand the database inquiry function to fill the entire screen.
	EXIT	Return to the previous screen without modifying the match settings.
Enter	VERIFY	Validate the fields. If the validation is unsuccessful, the screen is redisplayed, an error message is displayed, and the first field in error is indicated.

If you are a Unix user with a terminal that does not have function keys, you must select a function using three key strokes, as follows:

1. Press the **ESCAPE** key.

On some terminals, you must combine the **CNTRL** key with the left bracket [key.

2. Press the numeric digit of the function.

For example, for function key 10, you must type 1-0.

3. Press the **Enter** or **RETURN** key.

On some terminals, you must combine the **CONTROL** key with the M key.

Address Matching Screens

The screens shown in this section support the address matching function. The screens are listed in alphabetical order.

Entering the name of a key in the **Command** field is the same as pressing the function key (for example, to access online help, you could either press **F1** or, in the Command field, type **Help** and press **Enter**.)

Address Match Screen

The **Address Match** screen occupies the top half of the physical screen in the Interactive CODE-1 Plus System, unless you have entered the **FLIP** command to cause the database inquiry function to be displayed on the entire physical screen. Use this screen to enter an input address for CODE-1 Plus to match against the database. CODE-1 Plus returns the matched, standardized address.

Note: If you attempt to use the DPV option without having a license to do so, the following message will appear at the bottom of this screen:DPV UNAVAILABLE - NO LICENSE FOUND
orDPV UNAVAILABLE - LICENSE INVALID.

Field Name	Description
Firm Name	Optional. Name of the firm for the record you want to match.
Secondary Addr	Optional. Secondary address line for the record you want to match.

Field Name	Description
Primary Addr	Required. Primary address for the record you want to match.
City, ST	Required. Optional if ZIP Code is entered. City and state for the record you want to match. You can enter the state name or abbreviation.
ZIP Code	Required. Optional if City, St is entered. ZIP Code for the record you want to match.
USPS County Name or Urb. Name	If the address matches to a Puerto Rican address that has an urbanization name associated with it, this field contains that urbanization name. Otherwise, the field contains the USPS county name where the matched address is located. If Geographic Coding Plus is installed, you can optionally display the Geographic Coding county name.
Matched Addr.	Matched standardized address, including apartment number.
City, State ZIP	Matched standardized city/state/ZIP Code line.
CRRT (Carrier Route)	Matched standardized Carrier Route Code. If the CRRT field displays "R777", the ZIP+4 was suppressed because the record matched to an R777 (phantom) carrier route. For more information, refer to "Z4OUT" in your CODE-1 Plus Reference Guide .
DPBC + Check	Matched delivery point barcode (DPBC) and check digit.

Delivery Sequence Footnotes Screen

Use the Delivery Sequence Footnotes screen to view the Delivery Sequence Footnotes (DSF2 codes) that applied to your match attempt. To access this screen:

- Enter **DS** in the **Command** field

- Press **F8** from the Return Codes screen
- Press **F7** from the Parsed Elements screen.

DSF ² Code	Description
AA	Record matched the ZIP+4 database (the CODE-1 Plus database).
A1	No match was found.
A2	Alias street name was matched to a base street name on the database.
A3	A match was made to an alternate record on the database.
BB	Record was matched to the DSF ² file.
B1	No acceptable match was made to the DSF ² file.
B2	An alias street name matched a base street name on the DSF ² file.
B3	A match was made to an alternate record on the DSF ² file.
CC	Record matched the DSF ² file, but is missing secondary information.
C1	Input record matched but is missing secondary information.
D	City name or state was changed.
E	Primary address was changed.

DSF² Code

Description

F	Secondary address was changed.
G	The delivery point is vacant.
H	ZIP Code was changed.
I	Input address could not be parsed.
J	City, state, and ZIP Code could not be validated.
K	Multiple matches in primary address.
K1	Multiple matches due to missing or incorrect directionals.
K2	Multiple matches due to missing or incorrect suffix.
L	Multiple matches in secondary address.
M1	Missing street number.
M2	Address not found.
M3	No such primary number.
M4	Firm name not matched.
N1	Missing secondary address number.

DSF² Code

Description

N2	Secondary address number not found on file.
P1	Missing rural route/highway contract box number.
P2	Rural route/highway contract box number not found on file.
PB	Input address matched to a PBSA address.
Q1	Missing PO Box number.
Q2	PO Box number not found on file.

Miscellaneous Information/Base Address Screen

Use the **Miscellaneous Information/Base Address** screen to view the base address for the street that was matched (if applicable) and additional information about the matched address. To access this screen, enter the **DI** command or press **F8** from the **Statistics** screen.

Field Name

Description

PreciselyID	12-character unique and persistent identifier to reference an addressable location without storing the whole address string.
Base Address	Base street address for the alias street that the input record matched.
Preferred Alias	Preferred Alias Processing Indicator.

Field Name	Description
Abbreviated Alias	Abbreviated Alias Processing Indicator.
Line of Travel Results	5-character sequence code plus 2-character alternate sequence code.
Finance Number	USPS finance number.
Last Line Number	Alphanumeric, cross-reference value between the CODE-1 Plus City/State file and the ZIP Code file.
Standardized Firm Name	Firm name that was returned during the matching process.
USPS County Name	County where the address resides.
USPS County Number	USPS-assigned number for the county name.
Congressional District	USPS-assigned, 2-digit number representing the address congressional district.
Season	12-byte code indicating when mail can be delivered to a specific address.
LACS	<p>Location for the Locatable Address Correction Service indicator on the output record. This indicator flags any rural addresses that changed to urban addresses, such as RR 4 BOX 1 changing to 2200 MAIN ST. The next time you process the file, you can identify and process only those records on the ZIP+4 database with rural address changes. One of the following codes is stored:</p> <ul style="list-style-type: none"> • Blank — Address was not LACS converted (no change). • L — Address was LACS converted (changed to an urban address).

Field Name	Description
Matching Primary	
Range Low	Low house range used for the matching process.
Range High	High house range used for the matching process.
Parity	Even or odd numbers in range.
Matching Secondary	(If present)
Range Low	Low unit range used for the matching process.
Range High	High unit range used for the matching process.
Parity	Even or odd numbers in range.

Expanded Return Codes

Use the **Expanded Return Codes** screen to view text descriptions of each return code that displays on the **Return Codes** screen. To access this screen, enter the **ER** command in the **Command** Field. There are no entry fields on the Expanded Return Codes screen.

Geographic Coding Information

Use the **Geographic Coding Information** screen to view the geographic coding data for your matched address. To access this screen, enter the **GC** command in the **Command** Field.

Field Name	Description
Match Level	<p>Level of match obtained against the Geographic Coding Master File:</p> <ul style="list-style-type: none"> • 9 — ZIP Code and ZIP+4 Code matched the Master File. • 5 — Input ZIP Code matched. ZIP+4 Code did not match. • X — Geographic Coding Master File data has expired.
State	FIPS state code of the matched address.
County	FIPS county number and name of the matched address.
MSA	Metropolitan Statistical Area that encompasses this address.
Census Tract	6-digit number representing the census tract division within the county.
Census Block Group	Single-digit numeric code indicating the block group division of the census tract.
Lat/Long Level	<p>Level of latitude and longitude determined for the matched address:</p> <ul style="list-style-type: none"> • Z — Latitude and longitude represent the area center of the matched address. • T — Latitude and longitude represent the population center of the census tract determined for the matched address. • B — Latitude and longitude represent the population center of the census block group determined for the matched address.
Latitude	Latitude of the standardized address.
Longitude	Longitude of the standardized address.

Match Settings Screen

Use the Match Settings screen to tailor your processing requirements and specify whether CODE-1 Plus should perform ZIP Code correction. For each of the matching algorithms, you can change the default tightness/looseness settings. These settings indicate how close the data on the database must be to the input address in order for a match to occur. The tighter the setting, the more closely the input address must match the database information. To access this screen, enter **MS** in the **Command** field or press **F4** from any match results screen.

You can modify the fields on the top half of the physical screen, along with the address matching fields. When the **Match Settings** screen displays, you can only enter data in the settings fields on the upper right portion of the screen. To save your new settings and return to the previous screen, press **Enter**. Once changed, the settings stay changed for subsequent matches until you change the settings again or exit.

Note: Although this screen allows you to change the default matching algorithm settings, we suggest that you maintain the default settings: (M)edium for all matching, and Y(es) for ZIP correction.

Field Name	Description
Algorithms	1-character code indicating the tightness/looseness of the firm name, directional and suffix, and street name match: <ul style="list-style-type: none">• E — Only equal matches are accepted.• T — Only tight matches are accepted.• M — Medium Matches are accepted (default).• L — Loose matches are accepted.
(V)anity City	1-character code indicating whether or not a vanity city name should be returned if it is the best match (i.e., it most closely matches the input). Type one of the following codes: <ul style="list-style-type: none">• X — Yes, return the vanity city name if it is the best match.• S — No, return the standard city name (default).

Field Name	Description
Correct ZIP	<p>1-character code indicating whether or not you want CODE-1 Plus to attempt to correct incorrect ZIP Codes (optional). Type one of the following codes:</p> <ul style="list-style-type: none"> • Y — Attempt ZIP Code correction, if necessary (default). • N — No, don't attempt ZIP Code Correction.
Output Case	<p>1-character code indicating whether or not the matched address should be presented in mixed case or upper case:</p> <ul style="list-style-type: none"> • C — Mixed case • L — Lower case • U — Upper case
Mult Secondary	<p>1-character code indicating whether to attempt multiple secondary component processing:</p> <ul style="list-style-type: none"> • Y — Attempt secondary match. • N — Assign default ZIP+4 Code.
Override City	<p>1-character code indicating whether the preferred last line city name should be stored:</p> <ul style="list-style-type: none"> • C — Store the city name from USPS City/State File (default city name) • P — Store the Primary City Name from the USPS City/State File. • Z — Store the ZIP+4 File Preferred Last Line City Name (override city name).

Multiple Elements Screen

Use the **Multiple Elements** screen to determine whether multiple match elements were found during the match attempt. To access this screen:

- Enter the **ME** command
- Press **F8** from the **Parsed Elements** screen
- Press **F7** from the **Statistics** screen

Field Name	Description
Was the city standardized?	<p>Code indicating whether or not the input city name was standardized:</p> <ul style="list-style-type: none"> • Blank — No match was found, or the input city name was the same as either the long or short city name on the database. • C — The input city name was standardized to either the long or short city name.
Was the state standardized?	<p>Code indicating whether or not the input state was standardized:</p> <ul style="list-style-type: none"> • Blank — No match was found, or the input state was the same as the state abbreviation on the database. • S — The input state was standardized to the appropriate abbreviation.
Was apartment detected in input?	<p>1-character code indicating whether or not CODE-1 Plus detected an apartment (or unit) in the input record:</p> <ul style="list-style-type: none"> • Y — An apartment was detected in the input. • N — No apartment was detected in the input.
Was “default record” matched?	<p>Code indicating whether or not the default record was matched:</p> <ul style="list-style-type: none"> • Blank — The record matched was not the default record, or no match was obtained. • H — Highrise default. • R — Rural Route default. • M — Military default.

Field Name

Description

Were multiple input elements found?	<p>Code indicating whether multiple input elements were found for the leading directional segment of the standardized address:</p> <ul style="list-style-type: none">• Blank — Only one value was found.• M — Multiple values were found.
Alternate addressing scheme	<p>Code indicating the type of alternate address scheme to use to obtain a match:</p> <ul style="list-style-type: none">• Blank — No alternate address scheme used.• D — Delivery point alternate logic used.• S — Small town default logic used.• U — Unique ZIP Code logic used.
Leading dir	<p>Code indicating whether or not multiple leading directional matches were found:</p> <ul style="list-style-type: none">• Blank — Only one leading directional was found.• M — Multiple leading directionals were found.
Street name	<p>Code indicating whether or not multiple street name matches were found:</p> <ul style="list-style-type: none">• Blank — Only one street name was found.• M — Multiple street names were found.
Suffix	<p>Code indicating whether or not multiple suffix matches were found:</p> <ul style="list-style-type: none">• Blank — Only one suffix was found.• M — Multiple suffixes were found.

Field Name	Description
Trailing dir	<p>Code indicating whether or not multiple trailing directional matches were found:</p> <ul style="list-style-type: none"> • Blank — Only one leading directional was found. • M — Multiple trailing directionals were found.

Parsed Elements Screen

Use the **Parsed Elements** screen to view the individual elements that make up the standardized address. If no address match was found, the fields on this screen are blank. To access this screen:

- Enter the **PE** command
- Press **F8** from the **Delivery Sequence Footnotes** screen
- Press **F7** from the **Multiple Elements** screen

Field Name	Description
Lead Dir	Returned leading directional
House	Returned house number
Street	Returned street name
Suffix	Returned suffix
Trail Dir	Returned trailing directional
RR/HC #	Returned rural route or highway contract route number

Field Name	Description
RR/HC Box	Returned rural route or highway contract box number
PO Box	Returned post office box number
Apt. Information	Returned apartment designator (i.e., STE, APT) and number
Short City	Returned short city name
ZIP Code	Returned 9-digit ZIP Code
Private Mail Box	Returned Private Mailbox information

Return Codes Screen

Use the **Return Codes** screen to view the return codes that correspond to your match attempt. To access this screen, enter the **RC** command in the **Command** field or press the **F7** function key from the **Delivery Sequence Footnotes** screen.

Note: If you hit a “seed record” during DPV processing, a message displays similar to: DPV KEY IS: S06430475462316207 To continue DPV processing, contact Precisely Technical Support for a new permanent key. For more information on DPV processing, “seed records,” and license keys, refer to [Getting Started With Interactive Processing](#).

Field Name	Description
General RC	<p>1-character return code indicating the success or reason for failure of the match attempt:</p> <ul style="list-style-type: none"> • Blank — The address match attempt was successful. • A — Unit number missing or not found on database. • B — Insufficient (or blank) address information for a match. • E — External match—auxiliary file processing. • H — House/box number not found on street. • M — Multiple matches were found. • S — Street name not found in ZIP Code. • X — The CODE-1 Plus Master File has expired. • Z — ZIP Code not found on database.
PreciselyID RC	<p>1-character return code indicating the success or reason for failure of the PreciselyID processing:</p> <ul style="list-style-type: none"> • Y — Unique identifier PreciselyID was found for the full address. • D — Unique identifier PreciselyID was found for the primary address (secondary information was dropped to find a match). • Y — Unique identifier PreciselyID was not found. • Blank — PreciselyID database was not queried.
City RC	<p>1-character return code indicating the success or reason for failure of the city match attempt:</p> <ul style="list-style-type: none"> • Blank — No address match was found, or the input city was correct. • B — No input city and state were found. • C — Mismatched city for valid input state/ZIP. • I — The input city was used; no cities available for the ZIP Code. • N — The input city name was not used. • S — Spelling errors in the input were corrected.

Field Name	Description
Firm RC	<p>1-character return code indicating the success or reason for failure of the firm name match attempt:</p> <ul style="list-style-type: none"> • Blank — The firm name match was successful, or no firm name was indicated in the input record. • F — The input firm name does not match the firm name on the database. • M — A firm name was in the input, but there were no firm names on the database for the matched address.
Address Prob	<p>Single digit that indicates the probable correctness of the address match:</p> <ul style="list-style-type: none"> • Blank — No address match was found. • 0 — The address match is most likely to be correct. • 1-8 — These values represent intermediate values on a sliding scale. • 9 — The address match is least likely to be correct.
Overall Prob	<p>Single digit that indicates the probable correctness of the address and firm name match:</p> <ul style="list-style-type: none"> • Blank — No match was found. • 0 — The match is most likely to be correct. • 1-8 — These values represent intermediate values on a sliding scale. • 9 — The match is least likely to be correct.

Field Name	Description
USPS Rec. Type	<p>USPS-defined type code of the ZIP+4 record used for matching:</p> <ul style="list-style-type: none"> • Blank — No match was obtained. • F — Firm record • G — General delivery record • H — High rise (apartment complex) record • P — PO Box record • R — Rural route or highway contract record • S — Normal street address record.
City Type	<p>1-character code describing the input city type:</p> <ul style="list-style-type: none"> • P — Primary city • S — Secondary city • V — Vanity city.
Dir. RC	<p>1-character return code indicating the success or reason for failure of the directional match attempt:</p> <ul style="list-style-type: none"> • Blank — No address match was found, or the directional was correct. • D — The directional does not match the database. • F — The directional was correct, but was in the wrong location (i.e., trailing directional should have been a leading directional). • N — No directional was found on the input address, but a directional was present on the database.
Suffix RC	<p>1-character return code indicating the success or reason for failure of the suffix match attempt:</p> <ul style="list-style-type: none"> • Blank — No address match was found, or the suffix was correct. • S — The suffix does not match the database. • N — No suffix was found on the input address, but a suffix was present on the database.

Field Name	Description
Unit RC	<p>1-character return code indicating the success or reason for failure of the unit (or apartment) match attempt:</p> <ul style="list-style-type: none"> • Blank — No address match was found, or the input unit was correct. • A — The unit does not match the database. • N — No unit was found on the input address, but a unit was present on the database. • F — Suite number appended due to a firm name match.
Firm Score	<p>Single digit that indicates the probable correctness of the firm name match:</p> <ul style="list-style-type: none"> • Blank — No match was obtained. • 0 — The input firm name matched the output firm name exactly. • 1-9 — These represent intermediate values on a sliding scale.
Street Score	<p>Single digit that indicates the probable correctness of the street name match:</p> <ul style="list-style-type: none"> • Blank — No match was obtained. • 0 — The input street name matched the output street name exactly. • 1-9 — These represent intermediate values on a sliding scale.
Source of Addr.	<p>1-character code indicating whether the output street address was matched from the primary address line or the secondary address line:</p> <ul style="list-style-type: none"> • M — A combination of information from the two lines. • P — Primary line • S — Secondary line

Field Name	Description
Alias RC	<p>1-character return code indicating whether or not the input address matched an alias street name, as follows:</p> <ul style="list-style-type: none"> • Blank — The address matched a base street, or no match was found. • A — The address matched an alias street.
ZIP Status	<p>1-character code specifying the status of the output ZIP Code:</p> <ul style="list-style-type: none"> • A — The output ZIP Code is different from the original ZIP Code. • B — The output ZIP Code is blank. • C — The original ZIP Code is the output ZIP Code. • I — Invalid -- No match could be obtained; the output ZIP code contains blanks because the input ZIP code was invalid. • O — The original ZIP Code is in the output location because no match was obtained. • U — Blank—A unique address match could not be obtained and there was no correlation between the input unique ZIP Code and the city/state. The original ZIP Code was blanked.
Source of ZIP	<p>1-character code indicating the source of the final ZIP Code:</p> <ul style="list-style-type: none"> • B — No ZIP Code was determined. • C — The final ZIP Code was determined from the city-based locality. • F — The final ZIP Code was determined from the ZIP-based locality. • M — The final ZIP Code was determined from the ZIPMOVE file. • Z — The original ZIP Code was retained.

Field Name	Description
POB ZIP Code	<p>1-character code indicating whether the address is located in a P. O. Box-only delivery zone. P. O. Box-only delivery zone addresses can only receive postal delivery through the use of a P. O. Box. No other postal delivery method is available for these addresses.</p> <ul style="list-style-type: none"> • Y — P. O. Box-only ZIP Code. • N — Not a P. O. Box-only ZIP Code.
“best fit” ZIPs	<p>Number of “best fit” ZIP Codes found during the match attempt.</p>
PBSA Ind	<p>1-character code indicating whether this address was found in the PBSA Table. DPV processing uses the PBSA Table to identify P. O. Box™ Street Addresses (PBSA). PBSA addresses are street addresses that really represent a USPS P. O. Box™.</p> <ul style="list-style-type: none"> • Blank — Not presented • Y — Found in the DPV PBSA Table. • N — Not found in the DPV PBSA Table.
Alt. Adr. Scheme	<p>1-character code indicating the type of alternate address scheme that was used to obtain a match:</p> <ul style="list-style-type: none"> • Blank — No alternate address scheme used. • D — Delivery point alternate logic used. • E — Enhanced high rise alternate match logic used. • S — Small town default logic used. • U — Unique ZIP Code logic used.

Field Name	Description
Alias Type	<p>1-character code indicating the alias type:</p> <ul style="list-style-type: none"> • Blank — Street record matched was not an alias street. • A — Abbreviation street name. This USPS abbreviation is for streets that are over 30 characters long. • C — Official street name change (Chamber of Commerce action). • O — Street record matched was a USPS “other” alias. • P — Street record matched was a USPS “preferred” alias.
Line of Travel RC	<p>1-character code describing the Line of Travel match obtained:</p> <ul style="list-style-type: none"> • Blank — Invalid data passed to matcher • 9 — 9-digit ZIP+4 match was successful • C — Call to LOT matcher failed. • F — Master file access failure. • V — Incompatible Master file. • D — 9-digit ZIP+4 match was unsuccessful (default coded).
DPV Flag	<p>1-character return code indicating the result of your DPV processing:</p> <ul style="list-style-type: none"> • D — Valid primary number; input missing secondary number (primary RR). • M — Unable to resolve the Multiple Condition. • N — No Delivery Point Validation. • S — Valid primary number; but secondary number (primary for RR) present and is not confirmed. • Y — Delivery Point validated. Primary number valid and second number (when present) valid. • Blank — Address not presented to DPV table.

Field Name	Description
NoStat Flag	<p>1-character code indicating the presence of statistics for this address. A "Y" indicates that the address is not a valid delivery address even though it has been validated by DPV.</p> <ul style="list-style-type: none"> • Blank — Not presented. • Y — Found match to 'No Stat' DPV hash table. • N — No match found to "No stat" DPV hash table.
Vacant Table Flag	<p>1-character code indicating that this address was found in the Vacant table.</p> <ul style="list-style-type: none"> • Blank — Not presented. • Y — Indicates that the address has been vacant for at least last 90 days. • N — Indicates that the address is not vacant.
CMRA Flag	<p>1-character code indicating whether a CMRA look-up has occurred:</p> <ul style="list-style-type: none"> • Y — Yes, this is a CMRA. • N — No, this is not a CMRA. • Blank — Not presented. <p>NOTE: This code will only be presented if the DPV flag is Y, S, or D.</p>
RDI Flag	<p>1-character code describing the Residential Delivery File (RDI) match obtained:</p> <p>Blank — RDI match not attempted or not found.</p> <p>B — Business confirmed.</p> <p>M — Address is mixed business and residential.</p> <p>R — Residence confirmed.</p>
First Four Additional ZIPs	<p>The first four additional ZIP Codes that matched the input record but were not used as the output ZIP Code.</p>

Field Name	Description
Dropped Information Type	<p>1-character code indicating the type of information, if any, that was dropped by the matcher during the match attempt:</p> <ul style="list-style-type: none"> • Blank — Either no match was obtained, or no information was dropped. • A — A street address was dropped in order to obtain an RR/HC or PO Box match. • R — An RR/HC or PO Box address was dropped in order to obtain a street address match. • W — One or more characters were dropped during the address parsing process.
Data	Any miscellaneous characters that were dropped during the address matching process.

Note: The Dropped Information Type code refers to the type of information that was dropped by the matcher during the match attempt. The **Data** field contains characters dropped during the address analysis process, before the matcher even attempts a match. Therefore, it is possible to have a **Dropped Information Type** that is not blank, but a blank **Data** field.

Statistics Screen

Use the **Statistics** screen to view execution statistics about the number of calls made to the matcher while processing an address. This screen is particularly useful if you are encountering a problem with Interactive CODE-1 Plus. These statistics can help Precisely Technical Support Representatives solve your problem. To access this screen:

- Enter the **ST** command
- Press **F8** from the **Multiple Elements** screen
- Press **F7** from the **Dropped Information/Base Address** screen

Field Name	Description
City-based locality match results	<p>1-character code indicating the results of the match attempt in the city-based locality:</p> <ul style="list-style-type: none"> • Blank — Not attempted. • I — Attempted, improved (a match was found). • N — Attempted, no match found.
Finance number-based locality match results	<p>1-character code indicating the results of the match attempt in the finance number-based locality:</p> <ul style="list-style-type: none"> • Blank — Not attempted. • I — Attempted, improved (a match was found). • N — Attempted, no match found.
Original ZIP-based match results	<p>1-character code indicating the results of the match attempt in the original ZIP Code-based locality:</p> <ul style="list-style-type: none"> • Blank — Not attempted. • I — Attempted, improved (a match was found). • N — Attempted, no match found.
Number of match attempts	The number of attempts that were made to obtain the match results.
Std. Address RC	<p>1-character return code indicating the success or reason for failure of the standardized address match attempt:</p> <ul style="list-style-type: none"> • Blank — The address match attempt was successful. • A — Unit number missing or not found on database. • B — Insufficient (or blank) address information for a match. • H — House/Box number not found on street. • M — Multiple matches were found. • S — Street name not found in ZIP Code. • Z — ZIP Code not found on database.

Field Name	Description
ZIP RC	<p>1-character return code indicating the success or reason for failure of the 14-digit ZIP Coding attempt (i.e., was an output ZIP Code returned? If not, why not):</p> <ul style="list-style-type: none"> • Blank — The match attempt was successful. • A — Unit number missing or not found on database. • B — Insufficient (or blank) address information for a match. • H — House/Box number not found on street. • M — Multiple matches were found. • S — Street name not found in ZIP Code. • Z — ZIP Code not found on database.
ZIP+4 RC	<p>1-character return code indicating the success or reason for failure of the ZIP+4 Coding attempt (i.e., was an output ZIP+4 Code returned? If not, why not):</p> <ul style="list-style-type: none"> • Blank — The match attempt was successful. • A — Unit number missing or not found on database. • B — Insufficient (or blank) address information for a match. • H — House/Box number not found on street. • M — Multiple matches were found. • S — Street name not found in ZIP Code. • V — The input matched a non-deliverable street address. NOTE: A non-deliverable ZIP+4 Range is typically a new ZIP range where the USPS has not finalized assignments of ZIP+4 codes, thus not permitting assignment of postal code information at this time. • Z — ZIP Code not found on database.

Field Name	Description
CR-RT RC	<p>1-character return code indicating the success or reason for failure of the Carrier Route coding attempt:</p> <ul style="list-style-type: none"> • Blank — The match attempt was successful. • A — Unit number missing or not found on database. • B — Insufficient (or blank) address information for a match. • H — House/Box number not found on street. • M — Multiple matches were found. • S — Street name not found in ZIP Code. • Z — ZIP Code not found on database.
ZIP Index	Number of database reads done on the ZIP Index file in order to obtain the match.
City Details	Number of database reads performed on the City Details file in order to obtain the match.
Locality	Number of database reads performed on the Locality file in order to obtain the match.
Street Details	Number of database reads performed on the Street Details file in order to obtain the match.
County	Number of database reads performed on the County file in order to obtain the match.

Address Stack Screen

Use the Address Stack screen to view information related to as many as 10 addresses that have been identified by the matcher as multiples for the address entered on the match portion of the screen. The displayed data and headers are variable in length. Up to three screens of information

can be accessed by the Left and Right commands (showing additional information) and up to two screens with the Up and Down commands (showing additional addresses).

Field Name	Description
Address	Street name along with directionals, prefix/suffix, and house number
City	City name
St	State name
ZIP	ZIP Code and ZIP+4
DPC	Delivery point code and check digit
C-Rt	Carrier Route Code (Cnnn, blank if none)
RTP	<p>Three-digit combination of codes:</p> <ul style="list-style-type: none"> • USPS record type of record matched: • F — Firm • G — General delivery • H — High rise (apartment complex) • P — PO Box • R — Rural route/Highway contract • S — Normal Street Address • “Default” match: • H — High Rise Default • R — Rural Route Default • M — Military Default • blank — Not a default record. • Overall probability of match correctness: • 0-9 — 0 is most probably correct

Field Name	Description
Cnty/CD	County number
Primary	Primary range information (and parity)
Secondary	Secondary range information (and parity)
LL#	Last line number
Fin-Nr	Finance number
Urbanization	Puerto Rican urbanization
Firm	Firm name

Note: By typing SELECT and the appropriate line number in the **Command** field, you can choose which record of the displayed multiple addresses you would like in the input address field.

Database Inquiry Screens

This section describes screens that support the database inquiry function.

Apartments at a House Range

The **Apartments at a House Range** screen shows you all of the apartments at a particular house number. For each number (house), CODE-1 Plus displays the address, ZIP Code range, apartment number ranges, ZIP Codes, ZIP+4 Code ranges, carrier route codes, USPS record types (indicating the type of apartment), and number of firms.

To access this screen, enter the **AH<line number>** command or press **F4** from the **Houses on a Street** screen.

Field Name	Description
LN	Line number assigned to this apartment range.
Apt Range	Apartment number range.
ZIP	ZIP Code for the apartments in this range.
Z+4 Range	Range of ZIP+4 Codes that are valid for this apartment range.
Rte	Carrier or rural route number for the apartments in this range.
Record Type	USPS record type for the ZIP+4 records in this apartment range.
Apt Type	Unit designator for the apartments in this range (i.e., APT, STE).
Firms	Number of firms in this apartment range.

Cities in a State Screen

Use the **City Information** screen to view an alphabetical listing of all of the city names in a particular state. For each city, this screen also displays the valid state abbreviation and the ZIP Code (or range of ZIP Codes). To access this screen, enter the **CS <state abbr.>** command. You can enter this command from any screen in the system.

Note: As a short cut to entering a Locate command after the CS command, you can enter **CS <state abbr.> <location string>** as a single command

Field Name	Description
LN	Line number of the city.
City	City name.
State	Abbreviations for the state in which the city is located.
ZIP Range	Range of ZIP Codes that are valid for the city.
Type	Code indicating the type of city. One of the following codes appear: <ul style="list-style-type: none"> • P — Primary city. • S — Secondary city. • V — Vanity city.
Urb	Code indicating whether the city is a Puerto Rican urbanization area. One of the following codes appear: <ul style="list-style-type: none"> • Blank — The city is not a Puerto Rican urbanization area. • Y — The city is a Puerto Rican urbanization area.
Unique ZIP	Code indicating whether the ZIP Code for the city is unique to that city or resides in multiple cities. One of the following codes appear: <ul style="list-style-type: none"> • Blank — The ZIP Code is not unique to the city. • Y — The ZIP Code is unique to the city.

Cities in a ZIP Code Screen

Use the **Cities in a ZIP Code** screen to view all cities in a given ZIP Code. For each city, CODE-1 Plus displays the long city names, short city names, and city type. To access this screen:

- Enter the **CZ <line number>** or the **CZ <ZIP Code>** command
- Press **F5** from the **Cities in the Database** screen
- Press **F5** from the **Cities in a State** screen

The USPS allows city names to be up to 28 characters long. However, if a city name is longer than 13 characters, a **USPS short city name** is provided. Typically, long city names are shortened by removing vowels.

In cases where a ZIP Code has more than one city name, the screen shows these city names, and their accompanying city type. These city types indicate the **USPS-preferred city name**, and any **alternate city names** associated with the same ZIP Code. Preferred city names have a city type of “primary;” alternate city names have city types of “secondary” or “vanity.”

For example, ZIP Code 70510 is associated with the three city names Abbeville, Cow Island, and Meaux. Abbeville is preferred and has a city type of primary. All other city names have a city type of secondary.

Field Name	Description
LN	Line number for this city name.
Long City Name	Full name for the city.
State	Two-character state abbreviation for the city.
Short City Name	USPS shortened city name.
City Type	USPS designated city type. One of the following city types appears: Primary, Secondary, Vanity.

City Information Screen

Use the City Information screen to view an alphabetical listing of all city names in the CODE-1 Plus database. For each city, this screen also displays the state abbreviation and the ZIP Code (or range of ZIP Codes), the type urbanization name, and the unique ZIP Code that applies to the city.

The City Information screen displays when you first access the CODE-1 Plus Interactive System. If you switch to any of the address match results screens, you can return to this screen by typing **CI** in the **Command** field.

Note: As a short cut to entering a Locate command after the CI command, you can enter **CI <location string>** as a single command. <location string> on this screen may be either a city name or a city state combination.

Field Name	Description
LN	Line number of the city.
City	City name.
State	Abbreviations for the state in which the city is located.
ZIP Range	Range of ZIP Codes that are valid for the city.
Type	Code indicating the type of city. One of the following codes appear: <ul style="list-style-type: none">• P — Primary city.• S — Secondary city.• V — Vanity city.
URB	Code indicating whether the city is a Puerto Rican urbanization area. One of the following codes appear: <ul style="list-style-type: none">• Blank — The city is not a Puerto Rican urbanization area.• Y — The city is a Puerto Rican urbanization area.
Unique ZIP	Code indicating whether the ZIP Code for the city is unique to that city or resides in multiple cities. One of the following codes appear: <ul style="list-style-type: none">• Blank — The ZIP Code is not unique to the city.• Y — The ZIP Code is unique to the city.

Firms in a House Range Screen

Use the **Firms in a House Range** screen to view all firms located on a particular house range on a street. The firm information includes the house number ranges, apartment number ranges within a dwelling, the name of the firm located at each apartment/suite, ZIP Codes, ZIP + 4 Codes, and carrier route codes. To access this screen, enter the command **FM <line number>** (or by pressing **F5**) from the **Streets in a City** or **Streets in a ZIP Code**, **Houses on a Street**, or **Apartments at a House Range** screens.

Field Name	Description
LN	Line number for this firm.
House Range	House number ranges that are valid for this firm.
Apt Range	Apartment number ranges that are valid for this firm.
Firm Name	Firm name.
ZIP Code	9-digit ZIP Code assigned to this firm.
C-Rt	Carrier route number for this firm.

Houses on a Street Screen

Use the **Houses on a Street** screen to view a listing of all of the house number ranges on a particular street. In addition to even/odd house number ranges, CODE-1 Plus displays ZIP and ZIP+4 Code ranges, carrier routes, and firm/alias name. To access this screen, enter the command **HS <line number>** (or press **F4**) from the **Streets in a City** or **Streets in a ZIP Code** screens.

Note: As a short cut to entering a Locate command after the HS command, you can enter **HS <line number> <location string>** as a single command. To view more lines of data, in the Command field, type FLIP and press **Enter**, or press **F10**.

Note: House ranges that are on an alias portion of the street appear with an “A” in the left-most column next to the house range. To see the base name for the house range, position your cursor on the alias house range and press **F2**, or enter the **ALIAS <line number>** command. The base street name appears on the bottom line of the screen. The ZIPMove Record Indicator appears in the example above as a “Z” and uses the same field location as the alias street range indicator. The ZIPMove Record Indicator supersedes the alias indicator.

Field Name	Description
LN	The line number of the house range.
House Range	The house number range.
E/O	An E or an O indicating whether this is a range of only even-numbered or only odd-numbered houses.
ZIP	The ZIP Code for the houses in this range.
Z+4 Range	The range of ZIP+4 Codes that are valid for this house range.
Rte	The carrier or rural route number for the houses in this range.
Typ	The USPS record type for the ZIP+4 records in this house range.
Firm/Alias Name	Firm name or range street alias name.

Streets in a City or Streets in a ZIP Code Screen

Use the **Streets in a City or Streets in a ZIP Code** screen to view an alphabetical listing of all street names in a given city or ZIP Code. For each street listed, CODE-1 Plus displays directionals, such as NE and SW, and suffixes, such as ST and BLVD.

To access this screen:

- Enter the SC or SL command (or press **F4**) from the **Cities in the Databases** screen, or **Cities in a States** screen.
- Press **F4** from the **Cities in a ZIP Code** screen.
- Enter the SZ command from any database inquiry screen.

Note: As a short cut to entering a Locate command after the **SC**, **SZ**, or **SL** command, you can enter SC <line number> <location string> as a single command.

Field Name	Description
LN	Line number of the street.
Dir	Leading directional for the street.
Street Name	Name of the street.
Sfx	Suffix for the street.
Dir	Trailing directional for the street.
ZIP Codes	Valid ZIP Code(s) for this street. This field only displays if you accessed this screen from the Cities in the Database screen (not the Cities in a ZIP Code screen).

Geographic Coding Plus Interface

If you have purchased Geographic Coding Plus from Precisely, you can access that product directly from CODE-1 Plus by typing the command GEO in the **Command** field on any CODE-1 Plus screen. The Geographic Coding Interface screen displays. If you do a match attempt before you enter the **GEO** command, your matched ZIP Code and ZIP + 4 Code appear in ZIP Code fields on the Geographic Coding Interface screen. This is the first screen of geographic coding data for your matched address. Please refer to your Geographic Coding Plus User's Guide for further reference on the fields and function keys on this screen.

Note: In a Unix environment, you must source the Geographic Coding Plus setup file before you access the Geographic Coding Interface. This procedure sets up the environment variables for the Geographic Coding Plus database.

Field Name	Description
ZIP Code	5-digit ZIP Code for the entered address.
ZIP+4 Code	4-digit ZIP+4 Code for the entered address.
DPBC	Delivery Point Barcode for the entered address.
House#	House Number for the entered address.
Match Level	Code indicating the level of match obtained against the Geographic Coding Master File. One of the following codes appears: <ul style="list-style-type: none">• 5 — The input ZIP Code matched, but the ZIP+4 Code did not.• 9 — Both the ZIP Code and ZIP +4 Code matched the Master File.• X — The Geographic Coding Master File data has expired.
State Code	2-character FIPS state code of the matched address.

Field Name	Description
FIPS County Code	2-character FIPS county number and 20-character county name of the matched address.
Census Tract	6-digit number representing the census tract division within the county.
Block Group	1-digit numeric code indicating the block group division of the census tract.
MSA Code	The 4-character Metropolitan Statistical Area that encompasses this address.
MSA Name	The 50-character Metropolitan Statistical Area name.
Lat/Long Level	<p>Code indicating the level of latitude and longitude determined for the matched address. One of the following codes displays.</p> <ul style="list-style-type: none"> • B — Latitude and longitude represent the population center of the census block group determined for the matched address. • T — Latitude and longitude represent the population center of the census tract determined for the matched address. • Z — Latitude and longitude represent the area center of the matched address.
Latitude	9-digit number (with six decimal places implied) followed by a 1-character directional (N or S) that occupy the first eight bytes of this area.
Longitude	9-digit number (with six decimal places implied) followed by a 1-character directional (E or W) that occupy the last eight bytes of this area.
Software Vintage	Indicates the version of Geographic Coding you are using.

Field Name	Description
File	Indicates the expiration date of the Geographic Coding File that you are using.
Distance in Miles	Number of miles between the two specified addresses, if necessary.

The following table describes the fields on the second and last screen of geographic coding data for your matched address.

Field Name	Description
ZIP Code	5-digit ZIP Code for the entered address.
ZIP+4 Code	4-digit ZIP+4 Code for the entered address.
DPBC	Delivery Point Barcode for the entered address.
House#	House Number for the entered address.
MCD/CCD Code	MCDs (Minor Civil Divisions) are the primary political or administrative divisions of a county, representing many kinds of legal entities with a variety of governmental and administrative functions. CCDs (Census County Divisions) are established in states where there are no legally established MCDs.

Field Name	Description
Confidence	<p>1-character code that indicates the confidence code source. One of the following codes appears:</p> <ul style="list-style-type: none"> • Z — ZIP level. • 0 — ZIP default. • 1 — ZIP sector method. • 2 — 5-digit household default method. • 3 — 5-digit boundary method.
PRIZM Cluster	2-character PRIZM cluster code and a 20-character PRIZM cluster name. PRIZM codes are lifestyle segment codes and definitions enabling for more precise information about the lifestyle and demographic features of a population.
Cluster Group	2-character PRIZM cluster social group code and a 20-character group name.
Place Code	5-character FIPS place code.
Incorporated	<p>1-character code indicating whether the entered address is in an incorporated area.</p> <ul style="list-style-type: none"> • Y — Incorporated. • N — Not incorporated.
Class Code	2-character class code.
Place Name	30-character place name.

Field Name	Description
GeoTAX Key	<p>NOTE: This field is only available to GeoTAX customers who are also licensed users of the Vertex Quantum or ComTax21 products.</p> <p>Up to 9 digits can be displayed in this field. The first 2 digits of this number represent the Vertex state code, the next 3 digits are the FIPS county code, and the next 4 digits, a Vertex city code.</p> <p>This information will only be displayed for those GeoTAX customers who have a subscription to the MATCHMST file from Vertex. Additional information on this subject can be found in the GeoTAX User's Guide.</p>
GeoTAX Key Return Code	<p>1-character code indicating the match results for the GeoTAX Key:</p> <ul style="list-style-type: none"> • Blank — No matching GTMASTR GeoTAX record found. • E — Exact match using state/county/place/ZIP Code/place name. • P — Partial match using state/county/place. • A — Alternate match using ZIP Code and place name. • N — Record is default coded based on valid state code.
Date Annexed	Place last annexed date.
Updated	Place last updated date.
Verified	Place last verified date.

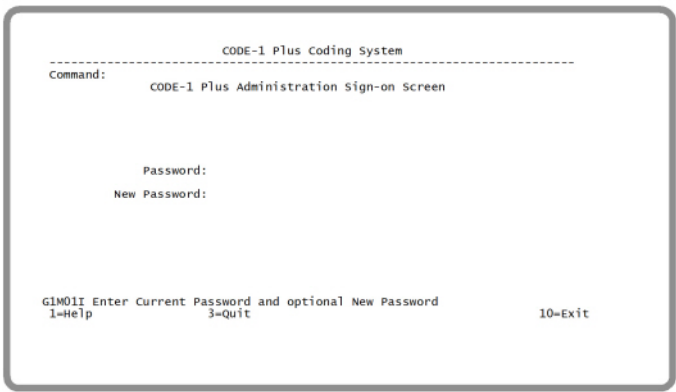
Screens that Support Site Customization

The screens shown in this section all support the interactive site customization function.

Administration Sign-on Screen

Use the **Administration Sign-on** screen to type in, and optionally update, the password required to access the site default update screens. You can access this screen by typing “ADMIN” on the **Command:** line from any match or database inquiry screen. If a new password is typed in, the screen returns with an area to “Confirm New Password.” If you do not have your initial password, contact **Precisely Technical Support** at support.precisely.com.

The password change process can be stopped by pressing the space bar through both new password fields, or by selecting Quit or Cancel.



Field Name	Description
Password	Area to type in current password
New Password	Area to type in a new password. The new password must be 1-8 alphanumeric characters with no leading or embedded spaces.
Confirm New Password	Area to re-type the new password for confirmation. This field will only be displayed if a new password has been entered.

Interactive Customization Screens

Use the Interactive Customization screens to view, and optionally update, the site-specific values you choose for your system. You can access these screens by successfully entering the existing system password on the Administration Sign-on screen (accessed by the “ADMIN” command). Values on these screens are not updated unless F5 is pressed (or “Save” on the command line is selected), and the changed values are not validated until either the **Enter** key or “Save” are pressed.

Field Name	Description
Initial Screen	Indicates Split or Full Screen display on entry to system <ul style="list-style-type: none">• S — Split screen display• F — Full screen display
Expiration Warning	Display or suppress database warning <ul style="list-style-type: none">• D — Display database warning• S — Suppress database warning
Firm	Firm Match Setting Value. Refer to the “Match Settings Screen” section earlier in this chapter for an explanation of these values. <ul style="list-style-type: none">• T — Tight• M — Medium• L — Loose• E — Equal
Dir/Suffix	Directional/Suffix Match Setting Value. Refer to the “Match Settings Screen” section earlier in this chapter for an explanation of these values. <ul style="list-style-type: none">• T — Tight• M — Medium• L — Loose• E — Equal

Field Name	Description
Street	<p>Street Match Setting Value. Refer to the “Match Settings Screen” section earlier in this chapter for an explanation of these values.</p> <ul style="list-style-type: none"> • T — Tight • M — Medium • L — Loose • E — Equal
Vanity City	<p>Match Setting for Vanity Cities. Refer to the “Match Settings Screen” section earlier in this chapter for an explanation of these values.</p> <ul style="list-style-type: none"> • X — Allow vanity city names in standardized output. • S — Only allow primary/secondary city names in standardized output.
Correct Input ZIP	<p>Match Setting for ZIP correction. Refer to the “Match Settings Screen” section earlier in this chapter for an explanation of these values.</p> <ul style="list-style-type: none"> • Y — Correct input ZIP Codes. • N — Do not correct input ZIP Codes.
Output Case	<p>Returned address settings. Refer to the “Match Settings Screen” section earlier in this chapter for an explanation of these values.</p> <ul style="list-style-type: none"> • C — Display matched address in mixed case. • L — Display matched address in lower case only. • U — Display matched address in upper case only.
Multiple Secondary	<p>Match Setting for Multiple Secondary Components. Refer to “Match Settings Screen” section earlier in this chapter for an explanation of these values.</p> <ul style="list-style-type: none"> • Y — Attempt secondary match. • N — Assign default ZIP+4 Code.

Field Name	Description
Preferred City Name	<p>Match Setting for Preferred City Name. Refer to Override City Name in the table from the "Match Settings Screen" section earlier in this chapter for an explanation of these values.</p> <ul style="list-style-type: none"> • C — Store the city name from USPS City/State File (default city name). • Z — Store the ZIP+4 File Preferred Last Line City Name (override city name).
Perform DPV Process	<p>Here you can select whether or not you wish to perform DPV processing:</p> <ul style="list-style-type: none"> • X — Perform DPV processing. • Blank — Do not perform DPV processing. <p>NOTE: This can also be selected by entering DPV on the command line of the Address Match screen.</p>
Perform LTO Process	<p>Here you can select whether or not you wish to perform Line of Travel Option (LOT) processing:</p> <ul style="list-style-type: none"> • X — Perform LTO processing. • Blank — Do not perform LTO processing. <p>NOTE: This can also be selected by entering LTO or LOT on the command line of the Address Match screen.</p>
Perform RDI Process	<p>Here you can select whether or not you wish to perform Residential Delivery File (RDI) processing:</p> <ul style="list-style-type: none"> • X — Perform RDI processing. <p>Blank — Do not perform RDI processing.</p> <p>NOTE: This can also be selected by entering RDI on the command line of the Address Match screen.</p>
Initial Command	<p>Command to be invoked upon entry of the system. Can be a combination of screen (CI, CS, CZ, or SZ) and locate commands separated by a semicolon. If 'FLIP' is entered, 'Initial Screen' is set to 'F'.</p>

The following table describes the fields on the second Interactive Customization screen.

Field Name	Description
Geographic Coding Available	<p>Indicates whether Geographic Coding Plus is installed on the system or whether the legacy Geographic Coding System is installed.</p> <ul style="list-style-type: none">• N — Geographic Coding Plus is not installed on the system.• Y — Geographic Coding Plus is installed on the system.• L — Legacy Geographic Coding System is installed.
GEO Lat/Long Data source	<p>Indicates which GEO file to use.</p> <ul style="list-style-type: none">• B — Use base master file.• A — Use advanced file.• F — Get finest granularity available on either base or advanced file.
Use GEO County	<p>Indicates whether to return the Geographic Coding county on the CODE-1 Plus Match screen on a successful match.</p> <ul style="list-style-type: none">• Y — Use Geographic Coding county.• N — Use USPS county.
ZIP Match Centroid	<p>Indicates centroid to return on a ZIP Code match.</p> <ul style="list-style-type: none">• C — Census tract centroid• Z — ZIP Centroid
Return Alias Base on Match	<p>Indicates whether to change an alias street name displayed on a match to the base street name.</p> <ul style="list-style-type: none">• Y — Display base street name.• N — Retain alias street name.

Field Name	Description
Seed Violation Bypass	<p>You can determine if the system should bypass any seed record violations during processing. To activate this option, enter "STOPBYPASS" on the command line of the admin function screen. Once you have entered "STOPBYPASS" on the command line, the following text will appear on that line: SEED STOP BYPASS IS ON. Enter "STOPBYPASS" to disable the option.</p> <p>Note: You will be required to have knowledge of the ADMIN password to access this process. If you enter "STOPBYPASS" on the command line on other screens you will receive an error message.</p>
Custom Page Title	The interactive system page title (for all screens) can be customized using this option.
Use Navigation	<p>The default setting for Intelligent Navigation can be set here.</p> <ul style="list-style-type: none"> • Y — Navigation on. • N — Navigation off.
Enhanced/All Street Matching	Enhanced/All Street Matching Indicator
Preferred Alias Processing	Abbreviated Alias Processing Indicator
Abbreviated Alias Processing	Abbreviated Alias Processing Indicator
Return Transid	Indicates Transid to be invoked upon exit from system (CICS only)
TS Queue Utilization	<p>Indicates whether Auxiliary or Main Storage is to be used for TS Queues (CICS only).</p> <ul style="list-style-type: none"> • A — Auxiliary storage is to be used. • M — Main storage is to be used.

Definition of PFKEYS

The third and last customization screen allows you to define your program function keys (PFKEYS) to maintain any in-house standards for PFKEY usage within the CODE-1 Plus system.

Working within this third screen, you can change the assigned PFKEY of a certain function or the text associated with a particular PFKEY. For example, you can tab down to PFKEY 01 and change the text from “Help” to “Info.”

Note: You CANNOT assign one PFKEY to have several functions. If you do, a message displays that “Key designation conflicts with a Multi-Screen Key.” Any errors in defining PFKEYS displays in red when you hit the Enter key after making your changes.

Database Information Screen

The Database Information screen shows information related to the software and database installed for CODE-1 Plus. Specific fields included in the screen are the software release and modification numbers, the CASS expiration date of the software, the database vintage date and expiration date (after which inquiry but not matching is permitted) and the days remaining until expiration.

Note: The DPV database vintage date displays only if you have performed a match with DPV turned on.

Customization File Administration

The site customization file (G1CPFDF) is an updateable indexed file for the interactive system. If you plan on modifying default initialization and processing values for your site, you need to install the customization file. Otherwise, the interactive system will function with the default match settings and processing on entry to and exit from the CODE-1 Plus software.

Note: The customization file is required for accessing the Geographic Coding Interface screen. If the customization file is not available, the Geographic Coding Interface is not available.

File Backup and Security

Because the site customization file can be modified any time the interactive system is available, it is critical to perform regular backups of the file at your site. This ensures ease of recovery of the current site settings in case the file is accidentally lost.

You should limit update access to the interactive system, because the settings in this file apply to all users. Online access to this file is controlled through a password screen; however, security precautions may be appropriate.

File Repair, Re-Initialization, and Password Display

If a backup copy of the customization file is not available and recovery is required, the following options exist using program G1CPDFL.

1. The first option is to physically delete the file and re-run the initialization job, DEFCUSTM.
2. A second option involves the same customization utility, but using job CUSTMUTL. In this case the utility can be used to repair the G1CPDFL file or display the encrypted password. This job performs the following tasks:
 - a. If an error is detected on the open to the customization file, the program attempts to create the file.
 - b. If the attempt is not successful, the program issues an error message and terminates.
 - c. If the file is opened successfully, a read is attempted for the control record.
 - d. If the read for the control record fails, the customization utility adds the control record to the file.
 - e. If the read for the control record is successful, the customization utility searches for the admin (password) record.
 - f. If the admin (password) record is found, the customization utility displays the encrypted password stored on the record.
 - g. If the admin record is not found, the initial install password is written to the file.

If required, a decrypting of the password can be obtained by contacting Precisely Technical Support. The Technical Support Representative can use the 16-character hexadecimal representation of the password to provide you with the current text value of the password.

Batch Uncoded Records Interface (G1CPBNC)

The Interactive CODE-1 Plus System includes a user exit that you can use to correct records that were not coded by the batch product. The interface, G1CPBNC, reads an encoded records file produced by batch CODE-1 Plus (C1BMNCO). The user exit is designed so that you can pull one record at a time into the screen input area, correct the record, and then write the corrected record out to a corrected file.

Note: To take advantage of the batch non-coded records interface to Interactive CODE-1 Plus, you or someone at your site must have modified the sample program, called G1CPBNC, to read records from the C1BMNCO file, pass them to Interactive CODE-1 Plus, wait for the user to correct the record, receive the records back from Interactive CODE-1 Plus, and then write the corrected records to an output file. This is discussed later in this section.

Once you modify a G1CPBNC user exit program, refer to [How it Works](#) to use the UR and UW commands from the CODE-1 Plus Interactive screen.

Type the **UR** (User Read) command in the **Command** field. An address is pulled from the input file and placed in the address input area.

How it Works

When you enter the UR command, the user exit program G1CPBNC is invoked and the functionality supplied by the UR command is contained within this program. The same situation applies to the UW command. You must customize the G1CPBNC to suit the need of your specific environment. A sample user exit program that you can customize is supplied as part of the product.

In addition to the input and output addresses, the complete **Command** field containing the UR or UW command is passed to the user exit so that additional command parameters can be required as part of the UR or UW commands (for example, record number of the address being corrected). You can specify several screen presentation options to control how the screen appears upon command completion. These screen presentation options control:

- Message that appears
- Clearing of the Command field to blanks
- Sounding of an audible alarm
- Clearing of the address area to blanks
- Cursor position upon the completion of the UR and UW commands

A sample program, G1CPBNC, is supplied with the CODE-1 Plus software. The program is written to read the supplied IVPFILE and write the coded records to a user-defined output file. Your input file may have different attributes (for example, record length or address element location) and will need to be modified accordingly.

In the following section, the required functionality for both the UR and UW commands is described, the calling interface for G1CPBNC is explained, and excerpts from the sample G1CPBNC program are shown. The UR and UW commands are enabled simply by making G1CPBNC available in the run-time environment.

Note: The remaining sections in this chapter are intended for programmers writing the G1CPBNC user-exit program.

UR COMMAND

When you enter a UR (User Read) command, the G1CPBNC user exit program is invoked with UXIT-FUNCTION set to UXIT-READ-FILE. The available functionality includes the following:

- Select and read a record from a user file containing addresses which are to be supplied when the UR command is entered. The selected address is passed to the calling program through the UXIT-P9IN field. The user exit must enable for multiple terminal operators working at the same time.
- The entire **Command** field containing the UR command is available to the G1CPBNC program so that additional user-defined parameters can be defined as part of the UR command. The **Command** field is passed from the calling program through the UXIT-COMMAND-LINE field.
- Specify the message that appears on the terminal screen at the completion of the UR command in the UXIT-PROMPT-MESSAGE field.
- Specify whether or not the **Command** field on the terminal screen is to be blanked-out upon completion of execution for the UR command. This is specified via the UXIT-COMMAND field.
- Specify whether or not an audible alarm is to sound at the completion of execution for the UR command. This is specified via the UXIT-ALARM field.
- Specify whether the cursor on the terminal screen is to be positioned on the address input lines or the **Command** field at the completion of execution for the UR command. Since CODE-1 Plus automatically performs an attempted match subsequent to a UR command, UXIT-CURSOR-CMD-ON-MTCH can be used to position the cursor on the command line (for an anticipated UW command) on a match or in the address area on a non-match or multiple. This is specified via the UXIT-CURSOR field.
- In order to coordinate the execution of UR and UW commands, an area of statically allocated memory is made available that is specific to one individual terminal user. This area is UXIT-SAVE-AREA.

UW COMMAND

When you enter a UW (User Write) command, the G1CPBNC user exit program is invoked with UXIT-FUNCTION set to UXIT-WRITE-FILE.

The results from attempting to match the address currently on the terminal screen are passed to the user exit in the UXIT-P9OUT and UXIT-P9AUDT fields. The user exit should determine whether to accept the address and write it to a user file containing corrected addresses or reject the address and display an error message on the terminal screen. The user exit must enable for multiple terminal operators working at the same time.

- The entire **Command** field containing the UW command is available to the G1CPBNC program so that additional user-defined parameters can be defined as part of the UW command. The **Command** field is passed from the calling program through the UXIT-COMMAND-LINE field.
- Specify the message which appears on the terminal screen at the completion of the UW command in the UXIT-PROMPT-MESSAGE field.
- Specify whether or not the **Command** field on the terminal screen is to be blanked out upon completion of execution for the UW command. This is specified via the UXIT-COMMAND field.
- Specify whether or not an audible alarm is to sound at the completion of execution for the UW command. This is specified via the UXIT-ALARM field.
- Specify whether or not to clear the address input fields on the terminal screen at the completion of execution for the UW command. This is specified via the UXIT-ADDRESS field.
- Specify whether the cursor on the terminal screen is to be positioned on the address input lines or the **Command** field at the completion of execution for the UW command. This is specified via the UXIT-CURSOR field.
- In order to coordinate the execution of UR and UW commands, an area of statically allocated memory is made available that is specific to one individual terminal user and common to both the UR and UW commands. This area is UXIT-SAVE-AREA.

Program Parameters

Eleven logical parameters are passed in a single 01 level. These eleven parameters are as follows:

Position	Name	Length in Bytes	Contents
1-2	EXIT-FUNCTION	2	<p>Function code for this call. Your program must pass one of the following function codes:</p> <ul style="list-style-type: none"> • CL — Close the file. • OP — Open the file. • UR — Perform a read. • UW — Perform a write.
3-42	UXIT-COMMAND-LINE	40	Command line from the Interactive CODE-1 Plus Command field.
43-121	UXIT-PROMPT-MESSAGE	79	Message prompt that appears on the online screen after the return from this program.
122	UXIT-COMMAND	1	<p>Indicates whether or not to clear the command after completion of the UR or UW command.</p> <ul style="list-style-type: none"> • Y — Clear the Command field after completion of the UR or UW command. • N — Do not clear the Command field.
123	UXIT-ALARM	1	<p>Indicates whether or not to sound an audible alarm at the completion of the UR or UW command.</p> <ul style="list-style-type: none"> • Y — Sound an audible alarm at the completion of the UR or UW command. • N — Do not sound an alarm.

Position	Name	Length in Bytes	Contents
124	UXIT-ADDRESS	1	<p>Indicates whether or not to clear the address upon completion of the UW command. Not used during the processing for a UR command.</p> <ul style="list-style-type: none"> • Y — Clear the address area upon completion of the UR or UW command. • N — Do not clear the address area.
125	UXIT-CURSOR	1	<p>Indicates whether or not to place the cursor in the address fields at the completion of the UR or UW command.</p> <ul style="list-style-type: none"> • Y — Place the cursor in the address area. • N — Place the cursor at the Command field. • M — Place the cursor at the Command field on a match, or in the address area on a non-match or multiple.
126-221	UXIT-RESERVED	96	Reserved.
222-721	UXIT-P9IN	500	<p>During the processing for a UR command, this program should place the address which it is preparing to enter onto the online screen into this area. This field is not used during the processing of a UW command.</p>

Position	Name	Length in Bytes	Contents
722-5721	UXIT-P9OUT	5,000	During the processing for a UW command, this area contains the P9OUT area for the current address at the time the UW command was invoked. Not used during the processing of a UW command.
5722-6121	UXIT-P9AUDT	400	During the processing for a UW command, this area contains the P9AUDT area for the current address at the time the UW command was invoked. Not used during the processing of a UR command.
6122-6621	UXIT-SAVE-AREA	500	Memory that is statically allocated and preserved between invocations of the user exit.

Description of Supplied Sample G1CPBNC

When the UR command is invoked, this sample program sequentially reads an address record from the G1CPIVP file. As each address is displayed in response to each UR command, the **Command** field on the terminal screen is cleared to blanks, a message is displayed on the terminal screen indicating a successful read, no audible alarm is given, and the cursor is positioned to the address input area on the terminal screen. If at the end of the file ("end of file"), the **Command** field is not cleared to blanks, an error message is displayed on the terminal screen, an audible alarm is sounded, and the cursor is positioned to the **Command** field on the terminal screen.

When the UW command is invoked, the program first checks to ensure that a UR command preceded the UW command. If it did, then it next checks to see if an address match was successful for the current address. The corrected address could then be written to an user file. If the UW command was successful, then the **Command** field on the terminal screen is cleared to blanks, a message is displayed on the terminal screen indicating a successful write, and no audible alarm is given. If the UW command was not successful, then the **Command** field is not cleared to blanks, an error message

is displayed on the terminal screen, and an audible alarm is sounded. In either case, the cursor is positioned to the **Command** field on the terminal screen.

Note: The delivered version of G1CPBNC is set up to perform file I/O against the IVP output unmatched records file C1BMNCO. In CICS, the program reads and writes to extra partition datasets. The transient data queues are “G1IV” (read) and “G1OV” (write). On all other platforms, the input sequential dataset is “G1CPIVP,” and the output is to “G1CPOVP”. All datasets have LRECL=256, and BLKSIZE is determined by the job control language.

12 - Using Z4CHANGE

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What is the Z4CHANGE Option?

The Z4CHANGE Option is a product provided by the USPS that can save you a considerable amount of processing time. The Z4CHANGE Option is extremely useful if you have large name-and-address files that you use frequently. The Z4CHANGE Option enables you to run that file through CODE-1 Plus and attempt to match:

- Only those records with ZIP + 4 Codes changed by the USPS since the file was last processed
- Records that were not successfully coded on previous CODE-1 Plus runs.

In other words, if you have a list that you already processed using CODE-1 Plus, you can run the list each month using the Z4CHANGE Option processing, and attempt to match those records with new ZIP + 4 Codes.

Note: Before you use the Z4CHANGE Option, you must run your entire file through CODE-1 Plus one time without using Z4CHANGE Option. Then, each time you want to mail records from your file, run the file again using Z4CHANGE Option processing. Your list stays current, but you do not expend processing time confirming records that were already correct.

Z4CHANGE Option Database

Included with your CODE-1 Plus software is a Z4CHANGE Option database. The database is published by the USPS every month and contains all of the ZIP+4 Codes that the USPS changed in the previous 12-month period.

Rules for Using the Z4CHANGE Option

The USPS instituted the following rules regarding Z4CHANGE Option processing:

- You must initially run your entire mailing list through CASS-certified software.
- Subsequently, it is sufficient to use Z4CHANGE Option processing on that list to maintain its compliance with CASS rules.
- You must run the entire file again at the end of the third year following initial Z4CHANGE Option certification. (This means that you do not need to run the file through CASS-certified software every year, as long as you are using Z4CHANGE Option processing.)

Note: If the USPS determines that significant changes were made to the CASS requirements, you must reprocess your entire list using recently-certified software.

Activating the Z4CHANGE Option

To activate and use Z4CHANGE (C1P430), you can either pass, as parameters, the names of pre-defined call areas, or use the CS ZIP parameter and the Z4 OUT parameter to provide all the information necessary to perform the function accurately and return the appropriate information. For complete parameter record reference material, Appendix E, “Using the Database Functions.”

The call areas and the procedures for filling in the screens are described later in this chapter.

Using Z4CHANGE Option Processing

This section describes the changes to make to your CODE-1 Plus jobs to use Z4CHANGE Option processing (C1P430).

Parameters

To use Z4CHANGE Option processing, add fields to the CS ZIP and Z4 OUT parameters from a standard job. Follow the instructions below to perform Z4CHANGE Option processing in your batch job.

Process Your Entire List Through CODE-1 Plus

If you want to have CODE-1 Plus write the database vintage date in the output records, do the following:

1. In position 26-28 of the Z4 OUT parameter, specify the location for the database vintage date.
2. In position 30 of the Z4 OUT parameter, specify one of the following codes to indicate the format of the vintage date:
 - **C** — 4-byte character format (YYMM) (default)
 - **P** — 3-byte packed decimal format (YYMM)
 - **B** — 2-byte binary format (YYMM)

- 3 — 3-byte binary format (YYYYMM)
- 6 — 6-byte character format (YYYYMM)
- 4 — 4-byte packed decimal format (YYYYMM)

Each Month, Process Your File Again

If the vintage date is stored in your input records:

1. In positions 44-46 of the CS ZIP parameter, write the location of the master file vintage date in the input records.
2. In position 48 of the CS ZIP parameter, write one of the following format codes to tell CODE-1 Plus the format of the vintage date in the input records:
 - **C** — 4-byte character format (YYMM) (this is the default)
 - **P** — 3-byte packed decimal format (YYMM)
 - **B** — 2-byte binary format (YYMM)
 - 3 — 3-byte binary format (YYYYMM)
 - 6 — 6-byte character format (YYYYMM)
 - 4 — 4-byte packed decimal format (YYYYMM)
3. In positions 32-34 of the Z4 OUT parameter, write the location for the output Z4CHANGE Option Return Code. One of the following codes will be stored in the position you specify:
 - **0** — Address matching was not required for this record (the USPS has not changed this ZIP + 4 Code since the database vintage date).
 - **4** — Address matching was required for this record (the USPS has changed this ZIP + 4 Code since the database vintage date).
 - **8** — A fatal error occurred during processing.

If the vintage date is not stored in your input records:

1. In positions 50-55 of the CS ZIP parameter, specify the vintage date of the master file that was used to process this list the last time the list was processed. Write the date in YYYYMM format.
2. In positions 32-34 of the Z4 OUT parameter, write the location for the output Z4CHANGE Option return code. One of the following codes is stored in the position you specify:
 - **0** — Address matching was not required for this record (the USPS has not changed this ZIP+4 Code since the database vintage date).

- **4** — Address matching was required for this record (the USPS has changed this ZIP+4 Code since the database vintage date).
- **8** — A fatal error occurred during processing.

Calling Z4CHANGE From Your Own Driver

If you are using your own batch driver for CODE-1 Plus and you want to use the Z4CHANGE processing, use the following call area to invoke C1P430. A COBOL copybook of this area, Z4CPARM, is included with your installation.

Note: The C1PRPT callable report program does not print a USPS Form 3553 that reflects Z4CHANGE Option processing. If you want an automated Form 3553 facsimile, you must use the C1BM00 batch driver to run CODE-1 Plus.

The following table describes the Z4CHANGE Option call area layout:

Position	Name	Length	Contents
1	PARM-FUNCTION	1	Function code for this call. Your program must pass one of the following function codes: <ul style="list-style-type: none"> • O — Open the Z4CHANGE Option database and (optionally) check dates. • P — Process ZIP check request. • C — Close the Z4CHANGE Option database.
2-6	PARM-5-DIGIT ZIP	5	5-digit ZIP Code.
7-10	PARM-4-DIGIT ZIP	4	4-digit ZIP+4 Code.

Position	Name	Length	Contents
11-16	PARM-DATE-CODED-VINTAGE YYYYMM format	6	<p>If PARM-FUNCTION is set to O, your program must pass the date of the CODE-1 Plus database being used for this CODE-1 Plus run. This date will be compared to the date of the Z4CHANGE Option database to ensure that they are the same. CODE-1 Plus will then pass the vintage date on the Z4CHANGE Option database back to your calling program through this field.</p> <p>If PARM-FUNCTION is set to P, your program must pass the date (in YYYYMM format) of the master file that was last used to match the record whose ZIP Code is now being checked.</p> <p>If PARM-FUNCTION is set to C, this field is ignored.</p> <p>NOTE: This field uses a four-digit year in YYYY format. If leading zeroes are passed in lieu of century, century will be calculated using the 80/20 rule. That is, YY less than 80 will assume century=20, otherwise will assume century=19.</p>
17-29	N/A	13	Reserved.
30-39	PARM-DBLIB	10	Name of the library that holds the Z4CHANGE Option master file. Used for AS/400 only.

Position	Name	Length	Contents
40	PARM-RETURN-CODE	1	<p>This 1-character field is filled by C1P430 after the ZIP Code is checked. One of the following codes will be placed in this field:</p> <ul style="list-style-type: none"> • 0 — If PARM-FUNCTION is O, this means the file has been successfully opened and the dates match.If PARM-FUNCTION is P, this means the 9-digit ZIP Code has not been changed by the USPS since the last time the record was checked.If PARM-FUNCTION is C, this means the file has been closed. • 4 — If PARM-FUNCTION is O, this means the database was already opened.If PARM-FUNCTION is P, this means either the 9-digit ZIP Code has changed since the last time the record was checked, or the ZIP Code was not numeric.If PARM-FUNCTION is C, this means the file wasn't open, and therefore could not be closed. • 8 — If PARM-FUNCTION is O, this means the database could not be opened successfully, or the dates don't match.If PARM-FUNCTION is P, this means that the database was not open.If PARM-FUNCTION is C, this code is never returned.
41-65	Reserved	25	Reserved.

Generating Reports for Z4CHANGE Processing

When you run a Z4CHANGE job, you can also generate reports about the Z4CHANGE job run. These reports contain important processing information and include a Parameter Record Listing, CASS Form, Control Totals, Analysis of Matched Records, and Address Execution Statistics Reports. For more information on each of these reports, refer to [Generating Reports](#).

13 - Using Delivery Point Validation

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What is Delivery Point Validation?

The USPS introduced Delivery Point Validation (DPV) to validate the accuracy of address data to the physical delivery point.

Note: The USPS regulations require Delivery Point Validation (DPV) processing for CASS certification.

CODE-1 Plus does not validate addresses at the specific delivery-point level. CODE-1 Plus only confirms whether an address falls within the low-to-high address range encoded for the named street. CODE-1 Plus uses the DPV option to determine whether the actual address exists to the apartment or suite information level. The DPV option reduces your undeliverable-as-addressed (UAA) mail volume that results from inaccurate addresses to reduce postage costs and costs associated with the handling of inaccurate address information.

Delivery Point Validation processing also confirms whether an address is a commercial mail receiving agency (CMRA) that uses private mail boxes (PMB). You can use DPV to determine the potential validity of PMB information on an input address.

Although DPV can validate the accuracy of an existing address, it cannot be used to create address lists. The DPV product is a secure dataset of USPS addresses and does NOT contain addresses that are not delivered by the USPS.

Resolving Multiple Matches

Delivery Point Validation processing can also resolve multiple matches from the ZIP + 4 database to increase the number of ZIP + 4 coded records in your address list.

The DPV option processes every ZIP + 4 coded record against the DPV files to resolve multiple matches to the ZIP + 4 database. Resolving ZIP + 4 multiple matches increases your ZIP + 4 match rate, but also increases processing time. For this reason, you may wish to turn off some of these options.

Use the DPVIN parameter to define the options for multiple match conditions. When verifying proper candidates for DPV processing, the multiple match condition is first checked at the ZIP Code level, carrier route, directional, and then suffix. Multiple match conditions can occur in multiple categories.

The DPVIN parameter includes options for unique ZIP Code and small town default assignments and multiple secondary components. The following figure provides examples of multiple matches that can be Delivery Point Validated.

For more information on setting up multiple match options, refer to the DPVIN in Chapter 1, Parameters in your **CODE-1 Plus Reference Guide**.

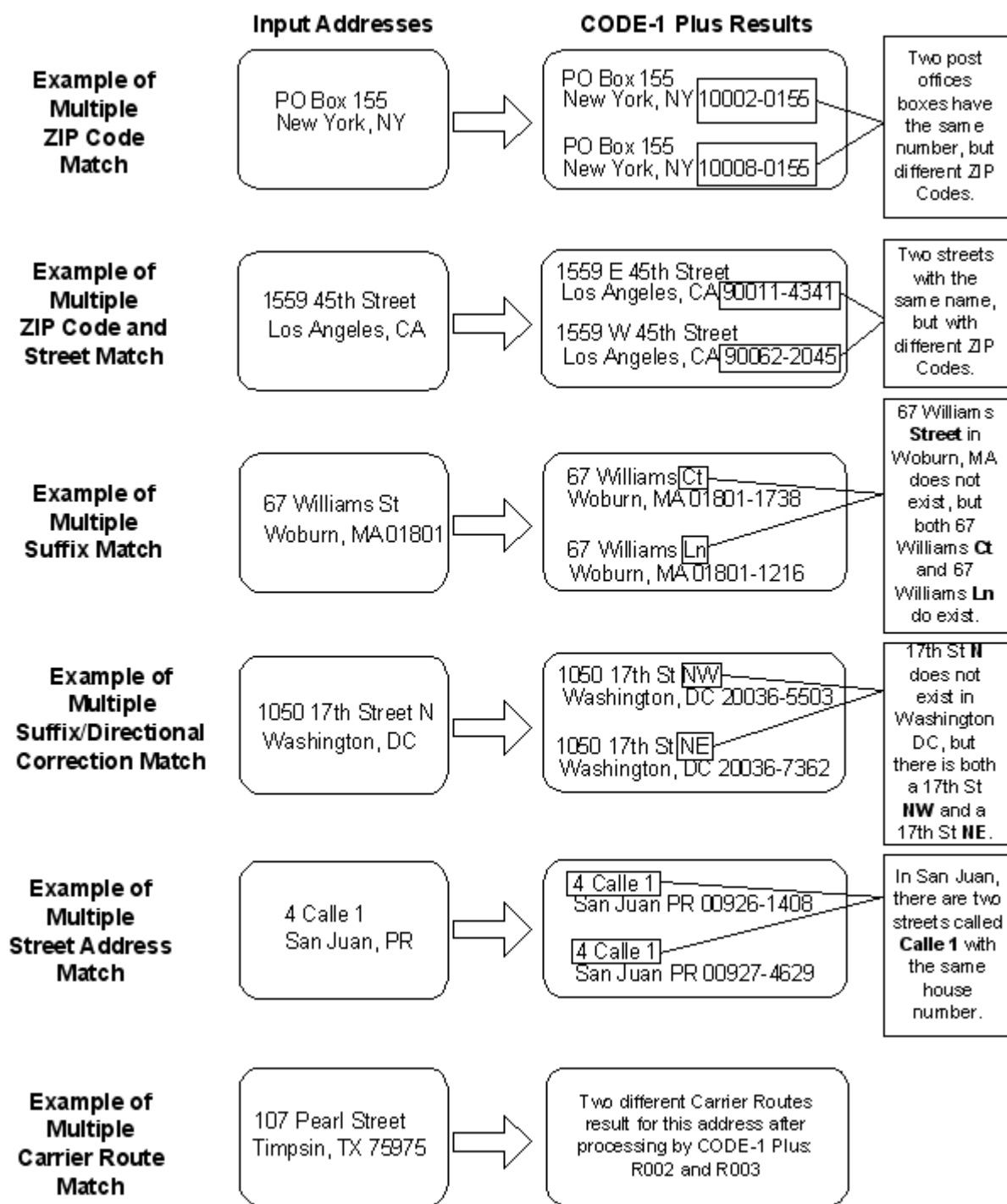


Figure 1: Multiple Match Examples

Using the Delivery Point Validation Database

Delivery Point Validation requires a separate database. Precisely provides an updated DPV database every month. The DPV database must be kept in synch with the USPS ZIP + 4 data. To use DPV processing, you must license the DPV option from Precisely and install a License Management key as required by the USPS. Please refer to your **License Management Guide** for more information on obtaining your permanent license key for DPV.

The following table describes the DPV database 120-day expiration cycle.

Database Month	Expiration
January	April 30
February	May 31
March	June 30
April	July 31
May	August 31
June	September 30
July	October 31
August	November 30
September	December 31
October	January 31

Database Month	Expiration
November	February 28
December	March 31

Installing the DPV Database

To install the DPV database in an IBM i environment, complete the following steps:

1. From the Work With Jobs screen, press **F20** to access Database Functions.
2. From the Database Functions screen, select option 2: Install Database.
3. On the Install CODE-1 Plus Databases screen (shown below), enter Y in “Install DPV Database?”.
4. Specify an install source of C for CD/DVD or I for IDS (downloaded). DPV should be installed into the same library as your US Postal Database.

Activating Delivery Point Validation

Activating DPV in Batch Mode

To activate DPV in batch mode, you must define:

- DPVIN parameter
- DPVOUT parameter
- Five MAILER parameters

Note: To process DPV on mainframe, the JCL must have DD statements for the DPV DB you intend to use. CODE-1 Plus customers should be aware that batch jobs running with DPV Split, LACS^{Link}, and Suite^{Link} may require up to 377M of GETVIS.

DPVIN Parameter

The DPVIN parameter activates DPV processing and provides processing options based on matches to the ZIP + 4 database. For more information on the DPVIN parameter, refer to Chapter 1, Parameters in your **CODE-1 Plus Reference Guide**.

DPVOUT Parameter

Use the DPVOUT parameter to define your DPV processing output requirements. For more information on the DPVOUT parameter, refer to Chapter 1, Parameters in your **CODE-1 Plus Reference Guide**.

Activating Delivery Point Validation

Activating DPV in Batch Mode

To activate DPV in batch mode, you must define:

- DPVIN parameter
- DPVOUT parameter
- Five MAILER parameters

Note: To process DPV on mainframe, the JCL must have DD statements for the DPV DB you intend to use. CODE-1 Plus customers should be aware that batch jobs running with DPV Split, LACS^{Link}, and Suite^{Link} may require up to 377M of GETVIS.

DPVIN Parameter

The DPVIN parameter activates DPV processing and provides processing options based on matches to the ZIP + 4 database. For more information on the DPVIN parameter, refer to Chapter 1, Parameters in your **CODE-1 Plus Reference Guide**.

DPVOUT Parameter

Use the DPVOUT parameter to define your DPV processing output requirements. For more information on the DPVOUT parameter, refer to Chapter 1, Parameters in your **CODE-1 Plus Reference Guide**.

Activating DPV in Callable Mode

To use DPV when calling C1MATCHx from your own driver, pass an X to the P9IDPV field in the P9IN call area.

Understanding DPV Return Information

Use the DPVOUT parameter to define the options and location in the output record for the following Delivery Point Validation processing return information:

- Return Codes
- Footnote Codes
- CMRA Flags
- False/Positive Flag
- Footnote Codes
- No Stat Flag
- Vacant Table Flag
- PBSA Flag

For more information on the DPVOUT parameter, refer to Chapter 1, Parameters in your **CODE-1 Plus Reference Guide**.

DPV Reports

This section describes the reports generated by DPV processing.

DPV by List Code Report

The DPV by List Code Report shows you the results of your DPV processing by list code. This report prints automatically when your job is run, unless you have an N in column 40 of the REPORT parameter. If you need to contact Technical Support, please have this report available. This report includes the following information:

- All of the list codes used in DPV processing
- Total number of records presented for DPV processing
- Total number of DPV validated records
- Total number of streets DPV validated
- Total number of high rises DPV validated
- Total number of PO Boxes DPV validated
- Total number of Rural Routes/Highway Contractors DPV validated
- Total number of Firms DPV validated
- Total number of General Delivery DPV validated
- Total number of primary number errors
- Total number of secondary number errors

DPV Processing Summary Report

The DPV Processing Summary Report prints automatically when your job is run, unless you have an N in column 38 of the REPORT parameter. If you need to contact Technical Support, please have this report available. This report includes the following information:

- Delivery Point Validation attempts with percentages
- Multiple attempts confirmed
- Unique/Small Town Default ZIP + 4 confirmed
- Number of ZIP+4 coded records
- Street records validated
- High Rise records validated
- PO Box records validated

- Rural Route/Highway Contract records validated
- Firm records validated
- Primary Number errors
- Secondary Number errors
- False Positives
- Total Residential/Business (RDI) attempts

Note: If you did not hit any seed records during your DPV processing, then the occurrence is not populated in the false-positive (seed violation) section. A one indicates that you hit a seed record, which halted your DPV processing.

DPV Error Messages

This section describes the error messages you may receive during DPV processing.

Note: Although DPV processing may cease during an execution of CODE-1 Plus, processing will continue to end-of-file. Any DPV errors you encounter will NOT affect your CODE-1 Plus processing.

Expiration of DPV Processing

The DPV option stops working the fourth month from the release of the database.

If you have an expired DPV database, this message displays:

DELIVERY POINT VALIDATION SUPPRESSED DUE TO DATABASE EXPIRATION DATE CHECK

Another example is:

*Database error on DHFDPV -> EXPIRED *

Open/Read Failure

If you have an open/read failure on the DPV database, this message displays:

```
*****
*OPEN/READ FAILURE ON DPV DATABASE*
*****
```

Seed Records and Stop DPV Processing

Seed records are artificially manufactured addresses provided as part of the DPV option. There are approximately 5 million seed records residing in a false-positive (seed violation) table to prevent list creation. For each negative response that occurs during DPV processing, a query must be made to the false-positive (seed violation) table. A match to this table stops DPV processing with the following error message:

```
*****
*DPV PROCESSING WAS TERMINATED DUE TO THE DETECTION OF WHAT IS DETERMINED
*
*TO BE AN ARTIFICIALLY CREATED ADDRESS. NO ADDRESS BEYOND THIS POINT HAS
*
*BEEN DPV VALIDATED. IN ACCORDANCE WITH THE LICENSE AGREEMENT BETWEEN USPS
*
*AND Precisely, DPV SHALL BE USED TO VALIDATE LEGITIMATELY OBTAINED*
*ADDRESSES ONLY, AND SHALL NOT BE USED FOR THE PURPOSE OF ARTIFICIALLY
*
*CREATING ADDRESS LISTS. THE WRITTEN AGREEMENT BETWEEN Precisely AND*
*ANY CUSTOMER OF Precisely SHALL ALSO INCLUDE THIS SAME RESTRICTION*
*AGAINST USING DPV TO ARTIFICIALLY CREATE ADDRESS LISTS. CONTINUING USE OF
*
*DPV REQUIRES COMPLIANCE WITH ALL TERMS OF THE LICENSE AGREEMENT. IF YOU
*
*BELIEVE THIS ADDRESS WAS IDENTIFIED IN ERROR, PLEASE CONTACT Precisely.*
*
*****
```

Note: To continue DPV processing, you must provide the Seed Code listed in the error message to Precisely Technical Support to receive a new license key that allows you to continue DPV processing.

Software Incompatibility

If your software is not compatible with ZIP + 4 database (or masterfile), this error message displays:

DPV MASTER FILE IS NOT COMPATIBLE WITH THE DPV SOFTWARE. DPV DISABLED.

DPV File Load or Location Definition

If your DPV database has not been loaded or the location definition for the DPV database has been improperly defined, this type of error message displays:

```
*SPLIT DPV ERROR# 00005, ON FUNCTION: INIT, ERROR DESC: Problem opening
dph.hsc file
```

	Error number

DPV Data Base Type

What If My Mailing Generates a Seed Violation?

Seed records are artificially manufactured addresses provided as part of the DPV option. There are a number of seed records residing in a false-positive (seed violation) table to prevent list creation. For each negative response that occurs in a DPV query, a query must be made to the false-positive (seed violation) table. A match to this table will stop DPV processing, but CODE-1 Plus processing will continue to the end of your job.

What to do When You Encounter a Seed

If you encounter a seed violation:

1. Review the appropriate USPS information.
 - a. For a LACS^{Link} seed violation, review the LACS^{Link} End User Licensee Performance Requirements document at:
https://postalpro.usps.com/LL_EU_LPR
 - b. For a DPV seed violation, review the USPS DPV Product Licensee Performance Requirements document at:
https://postalpro.usps.com/DPV_LPR
2. **Contact Precisely Technical Support at support.precisely.com.**

14 - Using LACSLink

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What is LACSLink?

You can use LACS^{Link} to implement the USPS Locatable Address Conversion System (LACS) service. LACS is used to provide computerized address list correction for addresses in areas affected by rural route and box numbers to city-style address conversion, and city-style to city-style address conversions.

LACS provides mailers an automated method of obtaining new addresses when a 911 emergency system has been implemented. The 911 address conversions normally involve changing rural-style addresses to city-style addresses. In some instances, conversions may result in the renaming or renumbering of existing city-style addresses.

Note: USPS regulations require LACS^{Link} processing for CASS certification.

What are the Benefits of LACSLink?

LACS^{Link} provides the following benefits:

- Complies with USPS CASS regulations. LACS^{Link} processing is a USPS CASS requirement.
- Prepares you for future USPS CASS regulations. In future CASS cycles, the USPS may expand LACS^{Link} processing requirements.
- Reduces undeliverable mail by providing the most current address information for matches made to the LACS file.
- Prevents the need for duplicate mailpieces or re-mailings after address corrections are received since the address correction is applied prior to the mailing.
- Lowers your costs by reducing the number of undeliverable and/or duplicate mailpieces by using the most current address information.
- Provides the opportunity for faster marketing through accurate mail delivery.

Who is Eligible to Use LACSLink?

All CODE-1 Plus customers operating in the United States are eligible to use LACSLink.

Note: The USPS has specific export rules that regulate the distribution of postal databases. At this time, DPV, LACSLink, and SuiteLink databases are not available to customers operating outside of the United States. For more information on the USPS rules, go to the

<https://postalpro.usps.com/https://postalpro.usps.com/https://postalpro.usps.com/> website.

How Does LACSLink Work?

The following steps describe the sequence of CODE-1 Plus LACSLink processing:

1. Standardizes input address information to conform with USPS requirements including the ZIP + 4 Code,
2. Matches the address against the LACS file.
3. If an exact match is made with the old address information on the LACS file, processing updates the address.
4. If a match is found, CODE-1 Plus returns the following information:
 - Original input address from the mailer
 - Input address as standardized and appended with the ZIP + 4 Code (if possible)
 - Standardized new address when the standardized input address matches the old address on the LACS file
 - National Delivery Index (NDI) report that includes a breakdown of deliverable address information
5. If no match is found, CODE-1 Plus returns the following information:
 - Original input address
 - Standardized ZIP + 4 coded version of the input address
 - USPS Form 3553
 - NDI report

How Do I Install the LACSLink Option?

The LACS^{Link} Option is installed as part of your standard CODE-1 Plus installation. The CODE-1 Plus installation contains all data needed to perform LACS^{Link} processing (e.g., the security key and the security file). After installing CODE-1 Plus, you must activate the LACS^{Link} Option to perform LACS^{Link} processing.

How Do I Install the LACS Database?

In this section, we provide platform-specific instructions for installing your LACS^{Link} database. The LACS^{Link} data must be kept in synch with the USPS ZIP + 4 data. Please note that the LACS^{Link} database has a 120-day expiration cycle. Databases expire on the following schedule.

Database Month	Expiration
January	April 30
February	May 31
March	June 30
April	July 31
May	August 31
June	September 30
July	October 31
August	November 30

Database Month	Expiration
September	December 31
October	January 31
November	February 28
December	March 31

To install the LACS database in an IBM i environment:

1. From the Work With Jobs screen, press F20 to access Database Functions.
2. From the Database Functions screen, select option 2: Install Database.
3. On the Install CODE-1 Plus Databases screen, enter Y "Install LACS^{Link} database?"
4. Specify an install source of C for CD/DVD or I for IDS (downloaded). LACS should be installed into the same library as your US Postal Database.

How Do I Activate LACSLink?

This section describes methods available for activating LACS^{Link} processing.

Using the Confirmation Options/LACSLink Processing Screen to Activate LACSLink

You can use the Confirmation Options/LACS^{Link} Processing screen (C1CPID50) to activate LACS^{Link} processing.

Field Name	Format	Description	Comments
LACS ^{Link} Processing Type	Blank or Z	<p>The type of LACS^{Link} processing to be performed:</p> <p>Z Perform the ZIP + 4 coding process and only call LACS^{Link} if the ZIP + 4 process returns a LACS indicator.</p>	Required.No default.
LACS ^{Link} Seed Record treatment	S or W	<p>This option allows LACSLink to stop batch jobs when a false-positive (seed record) has been encountered:</p> <p>S Shuts down CODE-1 Plus processing when a false-positive (seed record) is encountered.</p> <p>W Allows CODE-1 Plus to continue processing to completion of the entire job, generating Form 3553.</p>	<p>Required.</p> <p>Default is W.</p>
LACS ^{Link} Alternate Option	L or F	<p>This field allows you to specify if you want to perform alternated LACS^{Link} processing.</p> <p>R Perform LACS^{Link} processing.</p> <p>L Invoke limited LACS^{Link} subsystem processing. Provides the CODE-1 Plus non-LACS converted street address, city, and state data to the output standardized address and parsed elements fields.</p>	

Field Name	Format	Description	Comments
LACSLink Suppress 99 Return Code	Y or N	<p>This option allows you to specify whether to produce a "99" return code for LACS seed record processing.</p> <p>Y Do not produce "99" return code for LACS seed record processing.</p> <p>N LACS seed record processing results in "99" return code.</p> <p>Note: An "S" in "LACSLink Seed Record treatment" overrides this option.</p>	
Memory Model	P, U, S, M, L, or H	<p>This option allows you to specify size of LACSLink module.</p> <p>Blank LACS process will be using Medium memory model (default).</p> <p>P Pico memory model (no files in memory).</p> <p>U Micro memory model (no files in memory, only indexes).</p> <p>S Small memory model (Rv9 expansion in memory).</p> <p>M Medium memory model.</p> <p>L Large memory model.</p> <p>H Huge memory model (all files in memory).</p>	Required

Activating LACSLink in Batch Mode

To activate LACSLink in batch mode, define the LACS parameter record. For more information on the LACS parameter, please refer to "Parameter Reference" in your **CODE-1 Plus Reference Guide**.

Activating LACSLink in Interactive Mode

To activate LACSLink^{Link} processing, be sure the LACSLink^{Link} databases are in your database library and enter "LACS" in the command line.

Activating LACSLink in Callable Mode

To use LACSLink^{Link} when calling C1MATCHI from your own driver, one of three conditions must be returned from C1MATCHI:

- The matched P9O output address has a LACS indicator from the database (P9OLACS)
- The P9O General Return Code is not set to blank, B, or X in the output area (P9OGRC)
- The P9O default record indicator and the USPS record type are returning a value of "R" in the output area (P9ODFR and P9ORTP).

To activate LACSLink^{Link} in callable mode, call the CODE-1 Plus matcher and set the LACSLink^{Link} indicator as shown below.

Position	Name	Length	Contents
40	P9I-ZLACS	1	This field allows you to specify if you want to perform LACSLink ^{Link} processing. Blank Do not attempt to perform LACSLink ^{Link} processing (default) Y Perform LACSLink ^{Link} processing L Invoke limited LACSLink ^{Link} subsystem processing. Provides the CODE-1 Plus non-LACS converted street address, city, and state data to the output standardized address and parsed elements fields
491-500	P9IDBL	10	Database library name.

Position	Name	Length	Contents
491-500	N/A	10	These bytes are reserved for the Midrange environment.
491-500	P9IDBL	10	Database library name.

The following field has been added to the P9OUT call area structure.

Position	Field Name	Length	Comments
1215	P9OLACSLINK-IND	1	<p>Indicates if a table was matched:</p> <p>Blank No LACS processing occurred.</p> <p>F LACS seed violation has occurred.</p> <p>N No match occurred or a new address would not convert at run time.</p> <p>S Input address contained both primary and secondary information but match occurred using only primary information.</p> <p>Y Full match occurred.</p>

Position	Field Name	Length	Comments
1216-1217	P9OLACSLINK-RC	2	<p>Indicates the success of the LACS^{Link} process:</p> <p>Blank No LACS processing occurred.</p> <p>A LACS record match.</p> <p>00 No match.</p> <p>0 Address was passed to LACS process, but could not be coded by LACS.</p> <p>1 Address was successfully coded through the LACS process.</p> <p>2 A LACS False/Positive record was encountered, but software is operating in a NCOA/No Stop Capacity. As such, NCOA/No Stop Capacity allows for the LACS function to continue processing when a seed record is encountered.</p> <p>09 LACS^{Link} was able to find the input address on its internal tables but for some reason did not return the new (converted) address.</p> <p>14 Match found LACS record but would not convert.</p> <p>92 Match with secondary information.</p>

Position	Field Name	Length	Comments
1218-1226	P9OLACSLINK-DB-INFO	9	<p>Indicates the date of the database in YYYYMM format. Also contains error codes for LACSLink. If the value of P9OERR is "K" then the first five bytes of this field contain the error code.</p> <p>20120: LACS DB EXPIRATION</p> <p>20121: CAN'T OPEN SECURITY FILE</p> <p>20122: CORRUPTED SECURITY FILE</p> <p>20123: CHECK DIGIT VIOLATION ON SECURITY KEY</p> <p>20124: PREVIOUS SEED VIOLATION, SYSTEM LOCKED</p> <p>20126: RESTART KEY OR SECURITY FILE NOT CORRECT</p> <p>20127: UNKNOWN</p> <p>30000: LACS SEED VIOLATION</p> <p>31000: LACS SYSTEM ERROR</p> <p>32000: UNKNOWN as due to missing or corrupted LACSLink security file or key file.</p>
1227-1239	P9OLACSLINK-VERSION	13	Version number of the LACSLink database.

Understanding LACS^{Link} Return Information

This section describes the LACS^{Link} generated return information.

LACS^{Link} Processing Codes

The following return codes indicate the success of LACS processing:

	Return Code	Description
LACS_SEED_NCOA	2	Seed, but NCOA
LACS_SUCCESS	1	Successfully coded
LACS_FAIL	0	Failed to code
LACS_ERROR	-1	System error
LACS_SEED_VIOLATION	-2	LACS False/Positive record was encountered, LACS function was stopped.
LACS_DB_EXPIRED	-3	LACS database expired.
LACS_KEY_ERROR	-4	User defined LACSKEY is invalid.
LACS_ERROR_DATA	-5	Data file read error
LACS_ERROR_HINT	-6	Error in set table

	Return Code	Description
LACS_ERROR_DBASE0	-70	Database open error
LACS_ERROR_DBASE1	-71	Database open error
LACS_ERROR_DBASE2	-72	Database open error
LACS_ERROR_DBASE3	-73	Database open error
LACS_ERROR_DBASE4	-74	Database open error
LACS_ERROR_DBASE5	-75	Database open error
LACS_ERROR_PLAT	-8	Error in platform detection
LACS_ERROR_INFO	-9	Error in LACS information
LACS_ERROR_INIT	-10	Error in LACS initialization
LACS_ERROR_STATS	-11	Error in LACS statistics
LACS_ERROR_SECDE	-12	Error in LACS Secde
LACS_ERROR_SECIN	-13	Error in LACS Sedin
LACS_ERROR_PARSE	-14	Error in LLPARSE
LACS_ERROR_RV9	-15	Error in rv9esd

	Return Code	Description
LACS_ERROR_STMEM	-16	Error getting st. member
LACS_TEST_BREAK	-17	Break for test

	Return Code	Description
LACSRTN_MATCH	A	LACS record match
LACSRTN_NOMATCH	00	No match
LACSRTN_NOCONV	14	Match found LACS record but would not convert.
LACSRTN_UNIT	92	Match with secondary information.
LACSRTN_HRD	09	LACS ^{Link} was able to find the input address on its internal tables but for some reason did not return the new (converted) address.

LACSLink Reports

This section describes the reports generated by LACS^{Link} processing.

LACSLink Information on USPS Form 3553

The Qualitative Statistical Summary (QSS) section of the USPS Form 3553 (CASS Summary Report) displays as shown below if you are processing with the LACS^{Link} Option.

:	HIGH RISE	:	HIGH RISE	:	RURAL RTE	:	RURAL RTE	:	LACS/	:	EWS
:	SUITELINK	:		:		:		:		:	
:	DEFAULT	:	EXACT	:	DEFAULT	:	EXACT	:	LACSLINK	:	
:		:		:		:		:		:	
:	_____	:	_____	:	_____	:	_____	:	_____	:	_____
:	2	:	17	:	0	:	0	:	0	:	0
:		:		:		:		:		:	
:	_____	:		:		:		:		:	
PS FORM 3553, FEBRUARY 2013 See DMM Sec 708 for more information											

What If My Mailing Generates a Seed Violation?

Seed records are artificially manufactured addresses provided as part of the DPV option. There are a number of seed records residing in a false-positive (seed violation) table to prevent list creation. For each negative response that occurs in a DPV query, a query must be made to the false-positive (seed violation) table. A match to this table will stop DPV processing, but CODE-1 Plus processing will continue to the end of your job.

What to do When You Encounter a Seed

If you encounter a seed violation:

1. Review the appropriate USPS information.
 - a. For a LACS^{Link} seed violation, review the LACS^{Link} End User Licensee Performance Requirements document at:

https://postalpro.usps.com/LL_EU_LPR

- b. For a DPV seed violation, review the USPS DPV Product Licensee Performance Requirements document at:

https://postalpro.usps.com/DPV_LPR

- 2. **Contact Precisely Technical Support at**support.precisely.com.

15 - Using SuiteLink

In this section

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What is SuiteLink?

According to the USPS, 26% of all mail addressed to high-rise addresses (business and residential) ZIP+4 Code to a high-rise default code. The purpose of Suite^{Link} is to improve business addressing by adding known secondary (suite) numbers to allow delivery sequencing where it would otherwise not be possible.

The USPS defines Suite^{Link} as: “a data-only product containing business addressing information specifically identified as high-rise default records as a result of CASS processing. This product provided by the USPS allows developers to create a software interface that will have the capability of appending the secondary (suite) information to a business address, providing the input address is determined to be a highrise default record.”

Note: Suite^{Link} cannot be used as part of a standalone process; it must be used in conjunction with CODE-1 Plus.

Note: The USPS regulations require Suite^{Link} processing for CASS certification.

Note: The FIRMNM parameter is required when you use the STELNK parameter for Suite^{Link} processing.

What are the Benefits of SuiteLink?

Suite^{Link} enables customers to provide improved business addressing information by adding known suite information to business addresses, which will allow USPS delivery sequencing where it would not otherwise be possible.

The Suite^{Link} Option provides you with the ability to improve deliverability for the business addresses in your mailing list. Suite^{Link} improves business address information by adding accurate secondary (suite) information to the business addresses in your mailing list. Adding this additional information makes USPS delivery sequencing available for addresses in your mailing list that previously were not eligible.

Some of the benefits available to CODE-1 Plus customers through Suite^{Link} processing are described below.

- Improves the business address information in your mailing list by appending secondary (suite) information to business addresses.

- Ensures USPS delivery sequencing for the business addresses in your mailing list.
- Suite^{Link} processing provides another method to ensure postal coding accuracy resulting in less undeliverable mail.

Who is Eligible to Use SuiteLink?

Suite^{Link} is available to all CODE-1 Plus customers operating in the United States. Records that have been processed through CASS-Certified ZIP+4 address-matching software and identified as high-rise defaults are potential candidates for Suite^{Link} processing.

Note: The USPS has specific export rules that regulate the distribution of postal databases. At this time, DPV, LACS^{Link}, and Suite^{Link} databases are not available to customers operating outside of the United States. For more information on the USPS rules, go to the

<https://postalpro.usps.com/https://postalpro.usps.com/https://postalpro.usps.com/> website.

How Does SuiteLink Work?

CODE-1 Plus performs Suite^{Link} processing in the situations described below.

1. CODE-1 Plus calls Suite^{Link} when the following conditions are met:
 - Suite^{Link} has been activated via either batch mode, interactive mode, or callable mode and all required Suite^{Link} parameters are defined with valid values.
 - CODE-1 Plus successfully coded the address and the following information exists in the address record:
 - Firm name
 - Valid ZIP code
 - Valid ZIP+4 code
 - Primary number exists
 - A match has been made to a high-rise default record.
 - The CODE-1 Plus database is current.
 - The Suite^{Link} database is current.
2. If Suite^{Link} returns secondary data, CODE-1 Plus performs another match attempt using the corrected data.

3. CODE-1 Plus prints statistics at end of job.

How do I Install the SuiteLink Option?

The Suite^{Link} Option is installed as part of your standard CODE-1 Plus installation. The CODE-1 Plus installation contains all data needed to perform Suite^{Link} processing. After installing CODE-1 Plus and the Suite^{Link} database, you must activate the Suite^{Link} Option to perform Suite^{Link} processing.

How do I Install the SuiteLink Database?

In this section, we provide platform-specific instructions for installing your SLKDB database. The Suite^{Link} data must be kept in synch with the USPS ZIP + 4 data. Please note that the SLKDB database has a 120-day expiration cycle. Databases expire on the following schedule.

Database Month	Expiration
January	April 30
February	May 31
March	June 30
April	July 31
May	August 31
June	September 30
July	October 31

Database Month	Expiration
August	November 30
September	December 31
October	January 31
November	February 28
December	March 31

To install the Suite^{Link} database in an IBM i environment, do the following steps.

1. From the Work With Jobs screen, press F20 to access Database Functions.
2. From the Database Functions screen, select 2. Install Database.
3. On the Install CODE-1 Plus Databases screen, enter Y in the "Install SuiteLink Database?" field.
4. Specify an install source of C for CD/DVD or I for IDS (downloaded). Suite^{Link} should be installed into the same library as your US Postal Database.

How Do I Activate SuiteLink?

This section describes the methods available for activating Suite^{Link} processing.

Using the SuiteLink Processing Definition Screen to Activate SuiteLink

Use the **Suite^{Link} Processing** screen (C1CPID45) to define Suite^{Link} processing options. To access the **Suite^{Link} Processing** screen (C1CPID45):

1. From the Name/Address File Layout, page down to the **Suite^{Link} Processing** screen (C1CPID45).

2. Use the following table to complete the fields on the **Suite^{Link} Processing** screen (C1CPID45).

Field	Description
Specify Suite^{Link} Process	
Suite ^{Link} Error Shutdown Indicator	<p>Optional. Code indicating how to proceed if Suite^{Link} reports an error:</p> <ul style="list-style-type: none"> • I — Ignore error and continue to attempt Suite^{Link} processing. CODE-1 Plus does not generate a USPS Form 3553 (USPS CASS Summary Report) if you specify the value "I". • S — Shutdown when Suite^{Link} reports an error (default). Specify the value "S" if you want to generate a USPS Form 3553 (USPS CASS Summary Report). • W — Issue warning message and turn off Suite^{Link} processing. CODE-1 Plus does not generate a USPS Form 3553 (USPS CASS Summary Report) if you specify the value "W". • blank — Default is S.
Location of Suite ^{Link} Return Code	<p>Optional. Location for Suite^{Link} return code. One of the following codes is stored:</p> <ul style="list-style-type: none"> • A — Business name matched. • 00 — Business name not matched. • Blank — No default.
Location of Suite ^{Link} Match Code	<p>Optional. Location for Suite^{Link} match code. One of the following codes is stored:</p> <ul style="list-style-type: none"> • A — Matched. • B — Not matched. • C — Business name was all noise. • D — Highrise default record not found. • E — Database expired. • Blank — No default.

Field	Description
Location of Suite ^{Link} Fidelity Code	<p>Optional. Location for Suite^{Link} match fidelity. One of the following codes is stored:</p> <ul style="list-style-type: none"> • 1 — Exact match. • 2 — Acceptable match (one word not matched). • 3 — Unacceptable match (more than one word not matched). • Blank — No default. <p>Note: You should ignore the Fidelity Code if the Match Code is not 'A'. The Fidelity Code is '0' if the Match Code is B (no match), C (business name consisted entirely of "noise" words), or D (9-digit zip not recognized as a high rise default).</p>
Memory Model	<p>Optional. This option allows you to specify size of Suite^{Link} memory module.</p> <ul style="list-style-type: none"> • P — Pico memory model (no files in memory). • U — Micro memory model (no files in memory, only indexes). • S — Small memory model (slkhdr, slknormal, slknoise in memory). • M — Medium memory model (slknine file also in memory). • L — Large memory model (lcd file also in memory). • H — Huge memory model (slk file also in memory). • Blank — Default is M.
Exclude Secondary from Output Address Line	<p>Optional. Specify a code to indicate whether to call Suite^{Link} without appending the secondary information to the output address line. All other fields, ZIP + 4 value, DPC code, are determined using the secondary information returned by Suite^{Link}.</p> <ul style="list-style-type: none"> • I — Include secondary information from Suite^{Link} on the output address line. • E — Exclude secondary information from Suite^{Link} from the output address line. • Blank — Defaults to I.

Field	Description
Exclude any Invalid/Extraneous Secondary Information from Output Address Line	<p>Optional. Specify a code to include or exclude any invalid (extraneous) input secondary information.</p> <ul style="list-style-type: none"> • I — Include the invalid input secondary information. • E — Exclude the invalid input secondary information. • Blank — Defaults to I.

Activating SuiteLink in Batch Mode

To activate Suite^{Link} in batch mode, define the STELNK parameter record. For more information on the STELNK parameter, please refer to "STELNK " in your **CODE-1 Plus Reference Guide**.

Activating SuiteLink in Interactive Mode

To activate Suite^{Link} in Interactive mode, verify that the Suite^{Link} databases are defined in your database library and enter "SUITE" on the command line.

Activating SuiteLink in Callable Mode

To use Suite^{Link} when calling C1MATCHI from your own driver, the following five conditions must be returned from C1MATCHI.

- There must be a firm name in the P9I input area (P9IFRM).
- There must be a house number in the P9O output area (P9OHS-LB).
- The default record indicator must be returning a value of "H" in the P9O output area (P9ODFR).
- The USPS record type must be returning a value of "H" in the P9O output area (P9ORTP).
- There must be spaces in both the P9O General Return Code and the 9-digit Return Code in the output area (P9OGRC and P9O9RC).

If you get a match back from Suite^{Link}, you need to re-invoke the matcher with the new data. However, do not use the firm name that is returned; just use the secondary information.

Note: You can find the P9COMM copybook (a combination of P9IN, P9OUT, and P9AUDIT) with other copybooks delivered.

You can also optionally perform the following.

- Determine the action to take for Suite^{Link} errors.
- Determine whether an expired Suite^{Link} database can cause a job to terminate.
- Set the Small Memory Model flag.

Position	Name	Length	Contents
29	P9ISTE	1	<p>This field allows you to specify how Suite^{Link} errors will be treated.</p> <ul style="list-style-type: none">• I — Ignore error and continue to attempt Suite^{Link} processing. CODE-1 Plus does not generate a USPS Form 3553 (USPS CASS Summary Report) if you specify the value “I”.• S — Shutdown when Suite^{Link} reports an error (default). Specify the value “S” if you want to generate a USPS Form 3553 (USPS CASS Summary Report).• W — Issue warning message and turn off Suite^{Link} processing. CODE-1 Plus does not generate a USPS Form 3553 (USPS CASS Summary Report) if you specify the value “W”.

Position	Name	Length	Contents
30	P9ISTE-BYP	1	<p>This field allows you to specify if an expired SuiteLink database will cause the job to terminate.</p> <p>N Do not bypass Suite^{Link} database expiration date processing (default).</p> <p>Y Bypass Suite^{Link} database expiration processing.</p>
31	P9ISTE-SMM	1	<p>This field allows the small memory model version of Suite^{Link} to be used.</p> <p>N Do not use the Small Memory Model (default).</p> <p>Y Use the Small Memory Model.</p>
491-500	P9IDBL	10	Database library name.
491-500	N/A	10	These bytes are reserved for the Midrange environment.
491-500	P9IDBL	10	Database library name.

Note: See positions 1863-1878 and 2121-2170 of the P9OUT callable area for Suite^{Link} output.

SuiteLink Output

The output from the Suite^{Link} job posts as follows in the P9OUT call area:

Position	Name	Length	Contents
1863	P9OSTELNK-RC	2	Suite ^{Link} return code: A Business name matched. 00 Business name not matched.
1864	P9OSTELNK-MATCH-RC	1	Suite ^{Link} match code: A Matched. B Not matched. C Business name was all noise. D Highrise default record not found. E Database is expired.
1865	P9OSTELNK-MATCH-FID	1	Suite ^{Link} match fidelity: 1 Exact match. 2 Acceptable match (one word not matched). 3 Unacceptable match (more than one word not matched).
1866	P9OSTELNK-RLS-NUM	12	Suite ^{Link} release number.
491-500	P9IDBL	10	Database library name.
491-500	N/A	10	These bytes are reserved for the Midrange environment.
491-500	P9IDBL	10	Database library name.

DD Name

The DD name for Suite^{Link} is BSLKD.

SuiteLink Return Codes

The following return codes indicate the success of Suite^{Link} processing:

Return Code	Description
00	No Suite ^{Link} record match found.
A	Suite ^{Link} record match found.

Input and Output Examples

The following examples show examples of potential input and output with Suite^{Link}.

Input:

```
      1      2      3      4      5      6
----+---0---+---0---+---0---+---0---+---0---+---
2070618524200   Precisely
009269786300    RAMALLO BROS PKG
```

Output:


```
      1      2      3      4      5      6
----+---0---+---0---+---0---+---0---+---0---+---
STE 600  A 1Precisely
STE 1    A 2BROTHERS PKG RAMALLO
```

SuiteLink Reporting

The CASS 3553 report and the Control Reports include Suite^{Link} information.

CASS 3553 Report

Suite^{Link} information has been added to the Qualitative Statistical Summary section of the CASS 3553 report:

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 Postal Service SM 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 SM	EWS 	Suite ^{Link} SM

Control Reports

Line items for Suite^{Link} are on the Control Reports as follows:

SuiteLink Database version: March 2013, Product Version: 0650

Total Number of SuiteLink Match Attempts	xxxxxxxxx	nn.nn%
Total Number of Successful SuiteLink Match Attempts	xxxxxxxxx	nn.nn%
Total Number of Successful SuiteLink Matches with Corrected Suites	xxxxxxxxx	nn.nn%

16 - Using Line of Travel

In this section

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What is Line of Travel?

Line of Travel (LOT) is a feature that assigns a code to your address records, allowing you to qualify your Standard letters and flats for USPS Enhanced Carrier Route rates. LOT is also referred to as eLOT or Enhanced Line Of Travel. If you use Line of Travel, your mailing is eligible for the USPS non-automation Basic Rate. To qualify for this rate, your mail must be in LOT sequence. Assigning a LOT Code to your mailings saves you mailing time and money.

The Line of Travel code indicates the order in which delivery will be made within a given ZIP + 4 carrier route and whether delivery will be made in ascending or descending sequence. Line of Travel appends a four digit number and a sequence code to all name and address records with a ZIP + 4 Code. This LOT code is then used for sortation purposes to simulate walk sequence mailing within the number range associated with the ZIP + 4 Code. After the ZIP + 4 file is LOT-coded, the file is then sorted sequentially by 5-byte ZIP Code, 4-byte carrier route, 4-byte LOT number, and a 2- or 1-character sequence code.

The LOT-coded record includes:

- ZIP + 4 Code
- Delivery Point Code (DPC)
- Carrier Route
- Line of Travel number
- Ascending/descending sequence code
- Optional sequence codes used for sortation provided by the Line of Travel software

Note: Per USPS regulations, records with missing (blank) or invalid (0000) LOT information are to be sorted to the end of the CRRT.

Why Use Line of Travel?

Sorting your Standard letters and flats in line-of-travel sequence is the only way to qualify your mailings for USPS Enhanced Carrier Route rates when your mail does not meet the non-automation saturation and high-density rate requirements. The saturation and high-density categories require that your mail be sorted in walk-sequence. Line of Travel simulates walk-sequence, but only for ten or more pieces per carrier route.

Accessing Line of Travel

The following methods can be used to invoke Line of Travel:

- **Matcher (C1MATCHB)**—Line of Travel information can be returned by setting a switch in the matcher.
- **LOTOUT parameter**—Line of Travel information can be returned via the CODE-1 Plus batch driver using the LOTOUT parameter.
- **Callable subroutine (LTO10)**—You can call LTO10 as a subroutine from any program, as long as you use the parameters defined in this chapter. The LTO10 callable subroutine determines a 4-digit number and a 1-character sequence code for a record. These parameters accept your input and return a LOT code. Based on your output parameter, LTO10 returns the LOT code to your executable program.
- **Exit Routine (LTO60)**—The LTO60 exit routine posts Line of Travel information onto your name-and-address record when passed from any Precisely EXEC- level program. Batch driver processing requirements are passed via the EXITOP parameter.

Note: CODE-1 Plus does not use LTO60. LTO60 is used from other Precisely applications.

Getting Started with Line of Travel

Line of Travel derives a Line of Travel (LOT) code, which is comprised of a 4-digit Line of Travel sequence number and a 1-character Line of Travel sequence code. The Line of Travel sequence code is either “A” for ascending, or “D” for descending. Line of Travel then appends the LOT code to all name and address records with a Delivery Point Barcode and a Carrier Route that matches the Line of Travel Master File.

Sorting Your LOT Coded Records

To use Line of Travel to obtain the maximum discount, the USPS Line of Travel Technical Guide requires you to sort your LOT-coded records in ascending order in the following sequence:

1. 5-digit ZIP Code
2. 4-byte Carrier Route Code
3. 4-digit Line of Travel Code

Note: This includes only the numeric portion of the LOT code. It does not include the sequence code.

4. 4-digit ZIP + 4 Code
5. 2-digit Delivery Point Barcode in ascending AND descending order depending on the Line of Travel sequence code that is appended to each record

Note: The Line of Travel sequence code (either “A” or “D”) is essential for this step.

Since sorting in ascending and descending order can be unwieldy, Line of Travel returns two types of alternate codes that can be used for sortation. Rather than sorting your output file using the 2-digit Delivery Point Barcode, you should sort it using either the alternate sequence code or the hexadecimal sequence code.

The alternate sequence code is a two-byte code used for final sortation in place of the DPC add-on. It consists of an uppercase letter followed by a digit 0 through 9. Values range from “A0” (99 descending) through “J9” (00 descending), and “K0” (00 ascending) through “T9” (99 ascending).

The hexadecimal sequence code is a single-byte code, and it also allows you to sort your file in ascending order only. The hexadecimal values range from 0 to FF ascending, then FF through 0 descending.

Both the hexadecimal and alternate sequence codes are determined from the DPC add-on and the LOT sequence code. For more information on these codes, please refer to [Alternate Sequence Codes](#).

Note: You must sort your output file as discussed above prior to presorting your mailing when using the Precisely MailStream Plus software.

Calling the LTO10 Subroutine

The LTO10 callable subroutine determines a 4-digit sequence number and a 1-character sequence code for a record. In order to call LTO10, you must pass two parameters:

- Input Parameter — A 50-byte input area containing user-provided data passed from your executable program to LTO10.
- Output Parameter — A 100-byte output area containing information returned from LTO10.

Using the input parameter, you must pass a 5-digit ZIP Code, a 4-digit ZIP+4 Code, a 2-digit DPC, and a 4-byte Carrier Route as input.

LTO10 then derives a Line of Travel (LOT) code, which is comprised of a 4-digit Line of Travel sequence number and a 1-character Line of Travel sequence code. Based on your output parameter, LTO10 returns the LOT code to your executable program.

The Line of Travel sequence code is either “A” for ascending, or “D” for descending. Since sorting in ascending and descending order can be unwieldy, Line of Travel returns two types of alternate codes that can be sorted in ascending order only.

The alternate sequence code is a two-byte code used for final sortation in place of the DPC add-on. It consists of an uppercase letter followed by a digit 0 through 9. Values range from “A0” (99 descending) through “J9” (00 descending), and “K0” (00 ascending) through “T9” (99 ascending).

The hexadecimal sequence code is a single-byte code, and it also allows you to sort your file in ascending order only. There are 200 values ranging from 99 descending through 00 descending, then 00 ascending through 99 ascending. Both the hexadecimal and alternate sequence codes are determined from the DPC add-on and the LOT sequence code. For more information on these codes, please refer to [Alternate Sequence Codes](#).

Input Area — Parameter 1

The following table maps the positions in input area Parameter 1.

Position	Name	Length	Description
1	FUNCTION TO PERFORM	1	Enter one of the following codes: <ul style="list-style-type: none">• E — Perform end-of-job functions, for example, closing the Line of Travel Master File and any platform-specific functions. This option will not free memory.• Other — Perform match to the Master File.
2-10	RESERVED	9	Reserved.

Position	Name	Length	Description
11-15	ZIP CODE	5	Input ZIP Code to be matched against the Line of Travel Master File.
16-19	ZIP+4 CODE	4	Input ZIP+4 Code to be matched against the Line of Travel Master File.
20-21	DELIVERY POINT CODE	2	Input Delivery Point Code (DPC) add-on.
22-25	CARRIER ROUTE CODE	4	Input Carrier Route Code to be matched against the Line of Travel Master File.
26-50	RESERVED	25	Reserved.

Output Area — Parameter 2

The following table maps the positions in output area Parameter 2.

Position	Name	Length	Description
1	MATCH LEVEL	1	<p>Indicates the level of match obtained against the Line of Travel Master File.</p> <ul style="list-style-type: none"> • Blank — Invalid input was presented. Records with invalid input contain zeroes or non-numeric data in the ZIP and/or ZIP+4 Code field or non-numeric DPC or invalid Carrier Route Code. • 9 — Match against the Master File was successful. • C — Call to matcher failed. • D — Valid input was presented, but no match was successful with the Master File. Records with valid input contain numeric, non-zero data in the ZIP and ZIP+4 Code fields, plus a numeric DPC, and a valid formatted Carrier Route Code. • F — Master file open/read failure. • V — Master file not compatible with Line of Travel software.

Position	Name	Length	Description
2-5	LINE OF TRAVEL (LOT) SEQUENCE NUMBER	4	<p>Four-digit Line of Travel (LOT) sequence number generated from the input data defined in Parameter 1.</p> <p>If valid input was presented, but no match was successful with the Master File, the record is default coded, and this field contains zeroes. Please note that default-coded records are eligible for the basic enhanced carrier route rate.</p> <p>If invalid input was presented, this field is blank.</p>
6	LINE OF TRAVEL (LOT) SEQUENCE CODE	1	<p>One-character Line of Travel (LOT) sequence code generated from the input data defined in Parameter 1.</p> <ul style="list-style-type: none"> • Blank — No LOT number could be determined, due to invalid input. • A — Ascending. • D — Descending. <p>Note: If valid input was presented, but no match was successful with the Master File, the record will be default coded, and this code will be returned.</p>

Position	Name	Length	Description
7-8	ALTERNATE SEQUENCE CODE	2	Two-character code used for final sortation in place of the DPC add-on, which allows you to sort your file in ascending sequence only, instead of both ascending and descending. This code is determined from the DPC add-on field and the LOT sequence code. It consists of an uppercase letter followed by a digit 0 through 9. Values range from "A0" (99 descending) through "J9" (00 descending), and "K0" (00 ascending) through "T9" (99 ascending).
9	HEXADECIMAL SEQUENCE CODE	1	Single-character code used for final sortation in place of the DPC add-on, which allows you to sort your file in ascending sequence only, instead of both ascending and descending. This hexadecimal value is determined from the DPC add-on field and the LOT sequence code. There are 200 values ranging from 99 descending through 00 descending, then 00 ascending through 99 ascending.
NOTE: LTO10 returns both an alternate sequence code and a hexadecimal sequence code.			
10-13	RESERVED	4	Reserved.
14-17	SOFTWARE RELEASE NUMBER	4	Line of Travel release number, shown as nn.n.

Position	Name	Length	Description
18-19	SOFTWARE MODIFICATION NUMBER	2	Line of Travel modification number, shown as nn.
20-39	MASTER FILE IDENTIFICATION	20	Line of Travel Master File version identification string.
40-79	MASTER FILE CREATION SOFTWARE IDENTIFICATION STRING	40	Identifies the version of Line of Travel software that created the Master File.
80-100	RESERVED	21	

Line of Travel Exit Routine (LTO60)

If you want to post the Line of Travel code to your output file, use the LTO60 exit routine. You have access to this exit routine via the EXITOP parameter. The EXITOP parameter is available from most Precisely EXEC-level programs.

The EXITOP parameter defines your input and locations for your output. You must pass a 5-digit ZIP Code, a 4-digit ZIP+4 Code, a 2-digit DPC, and a 4-byte Carrier Route Code as input.

LTO10 then derives a Line of Travel (LOT) code, which is comprised of a 4-digit Line of Travel sequence number and a 1-character Line of Travel sequence code, and returns it to the LTO60 exit routine.

The Line of Travel sequence code is either “A” for ascending, or “D” for descending. Since sorting in ascending and descending order can be unwieldy, Line of Travel returns two types of alternate codes that can be sorted in ascending order only.

The alternate sequence code is a two-byte code used for final sortation in place of the DPC add-on. It consists of an uppercase letter followed by a digit 0 through 9. Values range from “A0” (99 descending) through “J9” (00 descending), and “K0” (00 ascending) through “T9” (99 ascending).

The hexadecimal sequence code is a single-byte code, and it also allows you to sort your file in ascending order only. There are 200 values ranging from 99 ascending through 00 descending, then

00 ascending through 99 ascending. Both the hexadecimal and alternate sequence codes are determined from the DPC add-on and the LOT sequence code.

The LTO60 exit routine subsequently returns the information to your Precisely EXEC-level program.

EXITOP Parameter for the LTO60 Exit Routine

The EXITOP parameter allows you to call the LTO60 exit routine. The following table provides an overview of the EXITOP parameter fields used to access the LTO60 exit routine.

Position	Field Name	Description	Comments
1-6	KEYWORD	EXITOP is the only acceptable entry.	Required.
8-15	EXIT ROUTINE NAME	LTO60 is the only acceptable entry. LTO60 is dynamically loaded when you enter this parameter.	Required.
19-22	Location of ZIP CODE	Location of the input record ZIP Code.	Required.

Position	Field Name	Description	Comments
23	Format of ZIP CODE	<p>Code indicating the format of your input record ZIP Code.</p> <ul style="list-style-type: none"> • C — 5-digit ZIP Code in character format. • P — 5-digit ZIP Code stored in a 3-byte packed field. • R — 9-digit ZIP+4 Code stored in a 5-byte packed field. • B — 5-digit ZIP Code stored in a 3- byte binary field. • 9 — 9-digit ZIP+4 Code stored in a 4-byte binary field. 	Required.
24-27	Location of ZIP+4 Code	Location of the input record ZIP+4 Code.	Required.
28	Format of ZIP+4 Code	<p>Format of the input record ZIP+4 Code. Enter one of the following:</p> <ul style="list-style-type: none"> • C — Character format • P — 3-byte packed field • B — 2-byte binary field. 	Required.
29-32	Location of DELIVERY POINT CODE	Location of the input record Delivery Point Code.	Required.

Position	Field Name	Description	Comments
33-36	Location for LOT CODE	<p>Location for the 5-character Line of Travel (LOT) code on the output record.</p> <p>NOTE: If invalid input was presented, this field will be left blank on the output record.</p> <p>If valid input was presented, but no match was successful with the Master File, the record is default coded. This field will contain four zeroes followed by a descending flag (0000D). Default-coded records are eligible for the basic enhanced carrier route rate.</p>	Required.
37-40	Location for ALTERNATE SEQUENCE CODE	Location for the 2-character Alternate Sequence code on the output record.	<p>Optional.</p> <p>One of these fields are required if you want the program to help you sort your records in the sequence required by the USPS to obtain the basic enhanced carrier route rate.</p>
41-44	Location for HEXADECIMAL SEQUENCE CODE	Location for the 1-character Hexadecimal Sequence code on the output record.	
45-48	Location for CARRIER ROUTE CODE	Location for the input record Carrier Route Code on the output record.	Required.
50	REPORT SUPPRESSION CODE	<p>Determines whether the Control Totals Report will be printed. Enter one of the following codes:</p> <ul style="list-style-type: none"> • Blank — The report will be printed (default). • X — The report will not be printed. 	Optional.

Position	Field Name	Description	Comments
51-66	RESERVED	These fields are reserved for future use.	

Example

For this example, the following is the input record for Line of Travel.

```
.....1.....2.....3.....4.....5.....6.....7.....
```

```
JOSEPH.BELL...18684.BLUE.BIRD.DRIVE.....GAITHERSBURG..MD20879-123084C001
```

The parameter below shows you how to define the EXITOP parameter for this input record.

```
.....1.....2.....3.....4.....5.....6.....7.....
```

```
EXITOP.LTO60.....059C.065C.069.256.261.263.072.X.....
```

Value	Description
EXITOP	Parameter name.
LTO60	Name of the exit routine to be called.
059	Columns 19-22 define the location of the input record ZIP Code. C in column 23 specifies a character ZIP Code format.
065	Columns 24-27 define the location of the input record ZIP+4 Code. C in column 28 specifies a character ZIP+4 Code format.
069	Columns 29-32 define the location of the Delivery Point Code.

Value	Description
256	Columns 33-36 define the location for the Line of Travel code on the output record.
261	Columns 37-40 define the location for the Alternate Sequence Code.
263	Columns 41-44 defines the location for the Hexadecimal Sequence Code.
072	Columns 46-48 defines the location of the Carrier Route Code.
X	Column 50 indicates that the Control Totals Report will not be printed.

Control Totals Report

The Control Totals Report shows you statistics about processed, matched, and unmatched records for a job. This report is printed automatically when your job is run, unless you type an “X” in position 50 of the EXITOP parameter. If you need to contact Precisely Technical Support about a problem with any of your jobs, please have this report handy for reference. Numbers and percentages are listed for the following:

- Records Processed — The number of records that were processed from your input file.
- Valid Format ZIP Code Presented — The number of records processed that contained 5-digit ZIP Codes in valid format. 5-digit ZIP Codes in valid format consist of numeric, non-zero data.
- Zero Or Non-numeric ZIP+4 Codes Presented — The number of records processed that contained zeros or non-numeric data in the ZIP+4 field.
- Valid Format ZIP+4 Code Presented — The number of records processed that contained 9-digit ZIP+4 Codes in valid format. 9-digit ZIP Codes in valid format consist of numeric, non-zero data.

- Valid Format DPC Values Presented — The number of records processed that contained 2-digit DPC add-on codes in valid format.
- Invalid Carrier Route Codes Presented — The number of records processed that contained a 4-digit Carrier Route Code in invalid format.
- Valid Carrier Route Codes Presented — The number of records processed that contained a 4-digit Carrier Route Code in valid format.
- Records Not Matching Master File, Invalid Input — The number of records that were not successfully matched against the Line of Travel Master File, due to invalid input. Records with invalid input contain zeroes or non-numeric data in the ZIP and/or ZIP+4 Code field, or a non-numeric DPC or invalid Carrier Route Code format.
- Records Not Matching Master File, Default Coded — The number of records processed that did not match the Line of Travel Master file, but contained valid input. These records were default coded, which means the LOT code is four zeroes followed by a descending flag (0000D). Please note that default-coded records do qualify for the basic enhanced carrier route rate.
- Records Matching LOT Master File — The number of records processed that contained valid input and were successfully matched against the Line of Travel Master File.
- Line of Travel Codes Determined — The number of records processed that were LOT coded. This number is equal to number of records matching at the ZIP+4 Code level plus the number of records that were default coded.
- LOT Numbers with Ascending Sequence Codes — The number of LOT numbers that are followed by an ascending (A) flag.
- LOT Numbers with Descending Sequence Codes — The number of LOT numbers returned that are followed by a descending (D) flag.
- Alternate DPC Sequence Codes Determined — The number of records processed for which alternate DPC sequence codes were determined. Please note that LTO60 returns an alternate sequence code only if positions 37-44 of the EXITOP parameter are not blank.

The following is an example of the Control Totals Report.

Line of Travel Option		LTO60: Control Totals	
		2/13/2013	
Line of Travel Option Master File Version: February 2013			
Total Records Presented To Processing Logic		5,890	
Records Processed		5,890	100.00% of Total Records
Valid Format ZIP Code Presented		5,890	100.00% of Records Processed
Zero Or Non-numeric ZIP+4 Codes Presented		884	10.11% of Records Processed
Valid Format ZIP+4 Code Presented		5,006	84.99% of Records Processed
Non-numeric DPC Values Presented		884	15.01% of Records Processed
Valid Format DPC Values Presented		5,006	84.99% of Records Processed
Invalid Carrier Route Codes Presented		868	14.74% of Records Processed
Valid Carrier Route Codes Presented		5,022	85.26% of Records Processed
Line of Travel Matching Attempts		5,890	
Records Not Matching Master File, Invalid Input		868	14.74% of Matching Attempts

Records Not Matching Master File, Default Coded Matching Attempts	319	5.42% of
Records Matching Line of Travel Master File Matching Attempts	4,703	79.85% of
Line Of Travel Codes Determined	5,022	
LOT Numbers with Ascending Sequence Codes	3,308	65.87% of LOT Numbers
LOT Numbers with Descending Sequence Codes	4,703	34.13% of LOT Numbers
Alternate DPC Sequence Codes Determined Coded Records	5,022	100.00% of LOT
Line of Travel Option	LTO60: Control Totals 2/13/2013	

Alternate Sequence Codes

This section describes how to sort your output records using the two types of alternate sequence codes generated by the Line of Travel Option. It also provides a reference table for all potential sequence codes.

Sorting LOT Records Using Alternate Sequence Codes

Line of Travel can help you sort your output records in the sequence required by the USPS to obtain the basic enhanced carrier route rate. Line of Travel returns two kinds of alternate sequence codes that you can use when sorting your records prior to presorting your mailing using, for example, the Precisely MailStream Plus software.

The Alternate Sequence Code(s) are normally obtained by using the LOTOUT parameter. If you are using a call or EXITOP to get the Alternate Sequence Code(s), note that in order for Line of Travel to return the alternate sequence codes, you must present a 2-character DPC add-on as input. If you are accessing the program via the EXITOP parameter, you must also specify the location of the input record DPC add-on by completing positions 29-32 on the EXITOP parameter, and you must specify a location on the output record for one of the alternate sequence codes by completing positions 37-40 or 41-44 on the EXITOP parameter.

Line of Travel uses the DPC add-on and the eLOT sequence code, which is either “A” for ascending or “D” for descending, to determine the two alternate codes.

The alternate sequence code is a two-character code used to sort your file in ascending order only. It consists of an uppercase letter followed by a digit 0 through 9. Values range from “A0” (99 descending) through “J9” (00 descending), and “K0” (00 ascending) through “T9” (99 ascending).

The hexadecimal sequence code is a single-character code, and it also allows you to sort your file in ascending order only. There are 200 values ranging from 99 descending through 00 descending, then 00 ascending through 99 ascending.

If you choose to use one of these codes to sort your file, you must sort your eLOT-coded records in ascending order in the following sequence:

1. 5-digit ZIP Code
2. 4-byte Carrier Route Code
3. 4-digit Line of Travel Code

Note: This includes only the numeric portion of the eLOT code. It does not include the eLOT sequence code.

4. 4-byte ZIP + 4 Code
5. 2-byte Alternate Sequence Code or 1-character Hexadecimal Sequence Code

Note: Per USPS regulations, records with missing (blank) or invalid (0000) LOT information are to be sorted to the end of the CRRT.

Sequence Code Table

This table provides a reference for potential sequence codes that correspond to a combination of the 2-digit DPC add-on, and the eLOT sequence code.

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
001	99	D	X'21'	A0
002	98	D	X'22'	A1
003	97	D	X'23'	A2
004	96	D	X'24'	A3
005	95	D	X'25'	A4
006	94	D	X'26'	A5
007	93	D	X'27'	A6
008	92	D	X'28'	A7
009	91	D	X'29'	A8

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

010	90	D	X'2A'	A9
011	89	D	X'2B'	B0
012	88	D	X'2C'	B1
013	87	D	X'2D'	B2
014	86	D	X'2E'	B3
015	85	D	X'2F'	B4
016	84	D	X'30'	B5
017	83	D	X'31'	B6
018	82	D	X'32'	B7
019	81	D	X'33'	B8
020	80	D	X'34'	B9
021	79	D	X'35'	C0
022	78	D	x'36'	C1
023	77	D	X'37'	C2

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

024	76	D	X'38'	C3
025	75	D	X'39'	C4
026	74	D	X'3A'	C5
027	73	D	X'3B'	C6
028	72	D	X'3C'	C7
029	71	D	X'3D'	C8
030	70	D	X'3E'	C9
031	69	D	X'3F'	D0
032	68	D	X'40'	D1
033	67	D	X'41'	D2
034	66	D	X'42'	D3
035	65	D	X'43'	D4
036	64	D	X'44'	D5
037	63	D	X'45'	D6

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

039	61	D	X'47'	D8
040	60	D	X'48'	D9
041	59	D	X'49'	E0
042	58	D	X'4A'	E1
043	57	D	X'4B'	E2
044	56	D	X'4C'	E3
045	55	D	X'4D'	E4
046	54	D	X'4E'	E5
047	53	D	X'4F'	E6
048	52	D	X'50'	E7
049	51	D	X'51'	E8
050	50	D	X'52'	E9
051	49	D	X'53'	F0
052	48	D	X'54'	F1

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

053	47	D	X'55'	F2
054	46	D	X'56'	F3
055	45	D	X'57'	F4
056	44	D	X'58'	F5
057	43	D	X'59'	F6
058	42	D	X'5A'	F7
059	41	D	X'5B'	F8
060	40	D	X'5C'	F9
061	39	D	X'5D'	G0
062	38	D	X'5E'	G1
063	37	D	X'5F'	G2
064	36	D	X'60'	G3
065	35	D	X'61'	G4
066	34	D	X'62'	G5

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

067	33	D	X'63'	G6
068	32	D	X'64'	G7
069	31	D	X'65'	G8
070	30	D	X'66'	G9
071	29	D	X'67'	H0
072	28	D	X'68'	H1
073	27	D	X'69'	H2
074	26	D	X'6A'	H3
075	25	D	X'6B'	H4
076	24	D	X'6C'	H5
077	23	D	X'6D'	H6
078	22	D	X'6E'	H7
079	21	D	X'6F'	H8
080	20	D	X'70'	H9

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

081	19	D	X'71'	I0
082	18	D	X'72'	I1
083	17	D	X'73'	I2
084	16	D	X'74'	I3
085	15	D	X'75'	I4
086	14	D	X'76'	I5
087	13	D	X'77'	I6
088	12	D	X'78'	I7
089	11	D	X'79'	I8
090	10	D	X'7A'	I9
091	09	D	x'7B'	J0
092	08	D	X'7C'	J1
093	07	D	X'7D'	J2
094	06	D	X'7E'	J3

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

095	05	D	X'7F'	J4
096	04	D	X'80'	J5
097	03	D	X'81'	J6
098	02	D	X'82'	J7
099	01	D	X'83'	J8
100	00	D	X'84'	J9
101	00	A	X'85'	K0
102	01	A	X'86'	K1
103	02	A	X'87'	K2
104	03	A	X'88'	K3
105	04	A	X'89'	K4
106	05	A	X'8A'	K5
107	06	A	X'8B'	K6
108	07	A	X'8C'	K7

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

109	08	A	X'8D'	K8
110	09	A	X'8E'	K9
111	10	A	X'8F'	L0
112	11	A	X'90'	L1
113	12	A	X'91'	L2
114	13	A	X'92'	L3
115	14	A	X'93'	L4
116	15	A	X'94'	L5
117	16	A	X'95'	L6
118	17	A	X'96'	L7
119	18	A	X'97'	L8
120	19	A	X'98'	L9
121	20	A	X'99'	M0
122	21	A	X'9A'	M1

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

123	22	A	X'9B'	M2
124	23	A	X'9C'	M3
125	24	A	X'9D'	M4
126	25	A	X'9E'	M5
127	26	A	X'9F'	M6
128	27	A	X'A0'	M7
129	28	A	X'A1'	M8
130	29	A	X'A2'	M9
131	30	A	X'A3'	N0
132	31	A	X'A4'	N1
133	32	A	X'A5'	N2
134	33	A	X'A6'	N3
135	34	A	X'A7'	N4
136	35	A	X'A8'	N5

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

137	36	A	X'A9'	N6
138	37	A	X'AA'	N7
139	38	A	X'AB'	N8
140	39	A	X'AC'	N9
141	40	A	X'AD'	O0
142	41	A	X'AE'	O1
143	42	A	X'AF'	O2
144	43	A	X'B0'	O3
145	44	A	X'B1'	O4
146	45	A	X'B2'	O5
147	46	A	X'B3'	O6
148	47	A	X'B4'	O7
149	48	A	X'B5'	O8
150	49	A	X'B6'	O9

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

151	50	A	X'B7'	P0
152	51	A	X'B8'	P1
153	52	A	X'B9'	P2
154	53	A	X'BA'	P3
155	54	A	X'BB'	P4
156	55	A	X'BC'	P5
157	56	A	X'BD'	P6
158	57	A	X'BE'	P7
159	58	A	X'BF'	P8
160	59	A	X'C0'	P9
161	60	A	X'C1'	Q0
162	61	A	X'C2'	Q1
163	62	A	X'C3'	Q2
164	63	A	X'C4'	Q3

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

165	64	A	X'C5'	Q4
166	65	A	X'C6'	Q5
167	66	A	X'C7'	Q6
168	67	A	X'C8'	Q7
169	68	A	X'C9'	Q8
170	69	A	X'CA'	Q9
171	70	A	X'CB'	R0
172	71	A	X'CC'	R1
173	72	A	X'CD'	R2
174	73	A	X'CE'	R3
175	74	A	X'CF'	R4
176	75	A	X'D0'	R5
177	76	A	X'D1'	R6
178	77	A	X'D2'	R7

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

179	78	A	X'D3'	R8
180	79	A	X'D4'	R9
181	80	A	X'D5'	S0
182	81	A	X'D6'	S1
183	82	A	X'D7'	S2
184	83	A	X'D8'	S3
185	84	A	X'D9'	S4
186	85	A	X'DA'	S5
187	86	A	X'DB'	S6
188	87	A	X'DC'	S7
189	88	A	X'DD'	S8
190	89	A	X'DE'	S9
191	90	A	X'DF'	T0
192	91	A	X'E0'	T1

Sequence Order	DPC add-on	eLOTSequenceCode	1-character Hexadecimal SequenceCode	2-ByteAlternate SequenceCode
----------------	------------	------------------	--	---------------------------------

193	92	A	X'E1'	T2
194	93	A	X'E2'	T3
195	94	A	X'E3'	T4
196	95	A	X'E4'	T5
197	96	A	X'E5'	T6
198	97	A	X'E6'	T7
199	98	A	X'E7'	T8
200	99	A	X'E8'	T9

17 - Using Residential Delivery Indicator (RDI) Processing

In this section

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Using RDI Processing	448
Downloading the RDI File	448
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What is Residential Delivery File Processing?

The Residential Delivery Indicator (RDI) database contains data that indicates whether the USPS identifies addresses as residential or business addresses.

Using RDI Processing

To use RDI processing, follow these steps.

1. Download the RDI file from Precisely.
2. Import the RDI file.
3. Use the DPVIN parameter to activate RDI processing.

Each step is detailed below.

Downloading the RDI File

To use RDI processing, download the RDI file directly from the Precisely estore, which is the fastest way to download software and data.

Installing the RDI File

To install the RDI file, follow these steps.

1. Access the **Database Functions** Menu from the **Work with Jobs** Menu.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System  T  C1CPMM00
MM/DD/YYYY          My Sample Job                        M  C1CPMM03
[Job]              Work with Jobs                        B  RXX.XM00

Type options, Press Enter.
 3=Copy    4=Delete  6=Print  7=Rename 12=Work with
16=Submit 99=Release job lock                Position to job

Creation  * - - - - - Last Activity- - - - - * Work
OPT JobID  Date      Date      User      Function      Library
- BRK01  05/01/1999  05/01/1999  D1DEF    Upd: Print Dflts  UPTTEST
- JOB01  05/01/2000  05/01/2000  D1DEF    Upd: Print Dflts  UPTTEST
- JOB02  05/01/2001  05/01/2001  D1DEF    Upd: Print Dflts  UPTTEST
- JOB03  05/01/2002  05/01/2002  D1DEF    Upd: Print Dflts  UPTTEST
- JOB04  05/01/2003  05/01/2003  D1DEF    Upd: Print Dflts  UPTTEST
- JOB05  05/01/2004  05/01/2004  D1DEF    Upd: Print Dflts  UPTTEST
- JOB06  05/01/2005  05/01/2005  D1DEF    Upd: Print Dflts  UPTTEST
- JOB07  05/01/2006  05/01/2006  D1DEF    Upd: Print Dflts  UPTTEST
- JOB08  05/01/2007  05/01/2007  D1DEF    Upd: Print Dflts  UPTTEST
- JOB09  09/01/2008  09/01/2008  D1DEF    Upd: Print Dflts  UPTTEST
- JOB10  10/01/2008  10/01/2008  D1DEF    Upd: Print Dflts  UPTTEST
- JOB11  11/01/2008  11/01/2008  D1DEF    Upd: Print Dflts  UPTTEST

F3=Exit    F5=Refresh    F6=Create    F11=Display Descriptions
F12=Cancel F19=Reclaim space F21=Print Summary F24=More keys

```

- Press **F20** from the **Work with Jobs** screen. "F20=Database Functions" does not need to be displayed at the bottom of the *Work with Jobs* screen to use the F20 function. The **Database Functions** screen (C1CPDB01) displays.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System  C1CPDB00
MM/DD/YYYY          My Sample Job                        C1CPDB01
                   Database Functions                    RXX.XM00

Select one of the following:

 1. Reduce DB by State
 2. Install DB
 3. Import RDI Table

 5. Print DB Detail Reports
 6. Print DB State Size Report
 7. Display DB Information
 8. Change default DB
 9. Convert EWS File
10. Load License File
11. Print License Report
12. Create and process the DPV Seed File
 P. Display encrypted administration password

Option  _

F3=Exit

```

- Select "3. Import RDI Tables" from the **Database Functions** screen. The *Import RDI Tables* screen (C1CPDB30) displays.

```

HH:MM:SS          CODE-1 Plus Name/Address Coding System  C1CPDB00
MM/DD/YYYY          My Sample Job                        C1CPDB30
                   Import RDI Tables                    RXX.XM00

Enter parameters for RDI table import:

Output File:
RDI DB File . . . . . RDIDB
Library . . . . . C1DBFILES

F3=Exit    F6=Execute

```

4. If necessary, change the Library field value. Then press **F6**.
5. If the RDI file already exists in the specified location, the *Import RDI Tables* screen displays with the message "RDIDB exists and will be replaced."

```
HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPDB00
MM/DD/YYYY      My Sample Job                             C1CPDB30
                  Import RDI Tables                       RXX.XM00

Enter parameters for RDI table import:

Output File:
RDIDB File . . . . . RDIDB
Library . . . . . C1DBFILES

RDIDB exists and will be replaced.
Press F6 to continue.

F3-Exit  F6-Execute
```

6. Press **F3** to exit without replacing the RDI file. The **Database Functions** screen (C1CPDB01) displays with the message "Import RDI Table into Database cancelled."
7. Press **F6** to continue. The *Import RDI Tables* screen displays a prompt to FTP the RDI file.

```
HH:MM:SS      CODE-1 Plus Name/Address Coding System      C1CPDB00
MM/DD/YYYY      My Sample Job                             C1CPDB30
                  Import RDI Tables                       RXX.XM00

Enter parameters for RDI table import:

Output File:
RDIDB File . . . . . RDIDB
Library . . . . . C1DBFILES

FTP the RDI file into C1PGMS/RDIDBIN now.

F3-Exit  F6-Execute
```

8. FTP the RDI file as directed. Then press **F6**.
9. After the FTP process completes, the **Database Functions** screen (C1CPDB01) displays with the message "Import RDI Table into Database completed".
10. When you finish using the database functions, press **F3** to return to the *Work with Jobs* screen (C1CPMM03).

Activating the RDI Option

After installing the RDI file, you can use RDI in your CODE-1 Plus processing. Use the following parameters to activate and define options for RDI processing.

DPVIN Parameter

Use the RDI Indicator field in position 52 of the DPVIN parameter to specify whether to perform RDI processing. For more information on the DPVIN parameter, refer to "DPVIN" in your **CODE-1 Plus Reference Guide**.

DPVOUT Parameter

Use the Location for Residential Flag field in positions 50-52 of the DPVOUT parameter to specify the location on the output record for a 1-character Residential Flag. One of the following codes is stored:

- R — Yes, this address is a residential-only delivery point.
- Blank — Not a residential delivery point.

For more information on the DPVOUT parameter, refer to "DPVOUT" in your **CODE-1 Plus Reference Guide**.

PGMNAM Parameter

The RDI Large Memory Module (DPV040L) can improve speed during RDI processing. Please refer to the PGMNAM parameter in your **CODE-1 Plus Reference Guide** for more information on using DPV040L.

REPORT Parameter

Use the following REPORT parameter fields to define the RDI reports.

Position	Field Name	Description
42	Residential Delivery Indicator (RDI) Processing Summary Counts	Optional. Specify a code to indicate whether to print the report: <ul style="list-style-type: none"> • Y — Print RDI counts. • N — Do not print RDI counts. • Blank — Default is Y.
44	Residential Delivery Indicator (RDI) Processing Counts by List Code	Optional. Specify a code to indicate whether to print the report: <ul style="list-style-type: none"> • Y — Print the RDI List Code Report. • N — Do not print the RDI List Code Report. • Blank — Default is Y.

RDI Reports

You can print RDI processing results on the following reports:

- Delivery Point Validation Processing Summary Report
- RDI Build Report
- RDI Counts by List Code Report
- Qualitative Statistical Summary (QSS) section of the USPS Form 3553 includes the RDI counts

18 - Auxiliary File Processing

In this section

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What is the Early Warning System?

The Early Warning System (EWS) was devised by the USPS to prevent address records from miscoding due to a delay in postal data reaching the USPS address matching files. The less recent the ZIP+4 File, the higher potential you have for miscoding addresses. When a valid address is miscoded because the address it matches to in the ZIP+4 File is inexact, it will result in what is termed a “broken address.” Once an address is broken, the effect is permanent without manual intervention.

Using the EWS Auxiliary File with CODE-1 Plus will prevent “broken addresses” from occurring. EWS consists of records containing partial address information limited to the ZIP Code, street name, pre- and post-directionals, and a suffix. For an address record to be EWS-eligible, it must be an address not present on the most recent monthly production ZIP+4 File.

Auxiliary File Processing and EWS

CODE-1 Plus implements EWS through Auxiliary File processing. There are two steps to setting up your auxiliary file. First, you must reformat the record into a structure recognizable by the CODE-1 Plus matching engine. Second, CODE-1 Plus must recognize the additional auxiliary file.

When you activate the Auxiliary File, addresses that match to the EWS File will not be coded. CODE-1 Plus will report these records as neither matched nor mismatched records. Additionally, addresses that match to the EWS file will appear on the Control Totals Report as “Confirmed via Match to Auxiliary File.”

Note: You must build the Auxiliary File using the C1AUXBLD program, supplied with your CODE-1 Plus software.

Note: The USPS refreshes the EWS file on a weekly basis (Thursdays). You can download the EWS file from at the USPS <https://postalpro.usps.com/> website. It is a line sequential file containing 3950 records and is about 345 KB in size. However, the number of records and file size is subject to change.

Building the Auxiliary File with the Early Warning System

There are three major steps you must perform to use EWS in your CODE-1 Plus jobs:

- Step 1 — Download the latest EWS File onto the NT/Windows machine. This file can be found on at the USPS <https://postalpro.usps.com/> website.
- Step 2 — Unzip the downloaded file to extract the EWS raw data.
- Step 3 — Translate the downloaded EWS File into a form that is recognized by CODE-1 Plus by using the C1AUXBLD utility.
- Step 4 — Tell CODE-1 Plus you want to use the translated EWS database, the Auxiliary File, in your job by using the AUXIL1 parameter.

Each step is detailed below, with platform-specific detail where needed.

C1AUXBLD Utility Program

CODE-1 Plus provides the C1AUXBLD utility program so you can build an EWS file as often as needed. This utility builds a Precisely-formatted file that will be utilized by the EWS module/lookup program.

To build the Auxiliary File with the EWS File:

1. Download the latest EWS File from the USPS <https://postalpro.usps.com/> website.
2. Unzip the file and transfer it to the platform on which you are running CODE-1 Plus.

Note: For non-PC-based platforms, convert to a fixed length file with a record length of 89 bytes. Also, if transferring to a mainframe platform, be sure the character set is converted to EBCDIC. There are approximately 4,000 records on the EWS file, which are subject to change.

Building Your Auxiliary File

To build your Auxiliary File, follow these steps:

1. Create a file (CRTPF) on your IBM i with a record length of 89.
2. FTP or otherwise upload the EWS file into the file you just created.

3. From the Work With Jobs screen, press **F20** to access the Database Functions screen.
4. Select Option 9: Convert EWS file into CODE-1 Plus format.
5. On the next screen, fill in the Input EWS file parameters with the name of the file you created. The output file is automatically placed in your database library. The Output File and Address Element Locations are not changeable at this time.
6. Press F6 to run the conversion. When you return to the menu, your file has been successfully converted and can be used as input to your CODE-1 job using the AUXIL1 parameter.

AUXIL Parameter

The AUXIL parameter is used with the C1AUXBLD program, and is used to define the field positions on the input Auxiliary File. This parameter comprises the following:

- Input file number and format
- 5-Digit ZIP location
- Street name/address line length and location
- Street suffix, pre-directional, post-directional, house range, secondary range, and secondary designator locations.

Position	Field Name	Description	Comments
1-5	Keyword	AUXIL is the only acceptable entry.	Required.
6	Number of the Input File	Only numbers 1 through 9 are acceptable in this position.	Required.

Position	Field Name	Description	Comments
8	Format Of Input Parameter	Code indicating the format type of your input parameter. Choose one of the following codes: <ul style="list-style-type: none"> • A — Street, Suffix, and Directionals in a single address line. • E — Address elements separate. 	Required.
10-12	Location of 5-digit ZIP Code	Location on the input record of the 5-digit ZIP Code.	Optional.
14-16	Location of Street Name/address Line	Location on the input record of the street name or address line.	Optional.
18-19	Length of Street Name/address Line	Length of the street name or address line.	Optional.
21-23	Location of Street Suffix	Location on the input record of the street suffix.	Optional.
25-27	Location of Pre-directional	Location on the input record of the pre-directional information.	Optional.
29-31	Location of Post-directional	Location on the input record of the post-directional information.	Optional.

Position	Field Name	Description	Comments
33-35	Location of House Range	Location on the input record of 20-character house range formatted as 10-character low range followed by 10-character high range. NOTE: If there is no house range information in the input record, populate this field with leading zeros.	Optional.
37-39	Location of Secondary Range	Location on the input record of 16-character secondary range formatted as 8-character low range followed by 8-character high range. NOTE: If there is no secondary range information in the input record, populate this field with leading zeros.	Optional.
41-43	Location of Secondary Designator	Location on the input record of the secondary designator.	Optional.

Activating the Auxiliary File/Early Warning System File

Auxiliary File matching is only available through the CODE-1 Plus batch driver (C1BM00), the callable batch driver (C1BM CBD), or a user-defined program calling the batch matcher C1MATCHx. When calling C1MATCHx through a user-defined program, you must populate P9IAUX as defined in the Input Call Area (P9IN).

EWS With C1BM00

Use the Submit CODE-1 Plus Job screen to create the AUXIL1 parameter record and indicate the location and usage of the EWS file during job submission.

To access the Submit CODE-1 Plus Job screen (C1CPSB09):

1. From the Define/Submit CODE-1 Plus Job (C1CPDS02), select Submit Batch Job.
2. From the Submit CODE-1 Plus Job (C1CPSB01), page down to the Submit CODE-1 Plus Job (C1CPSB09).
3. Use the following table to complete the fields on the Submit CODE-1 Plus Job (C1CPSB09).

Field Name	Description
Use Auxiliary Reference File?	<p>Required. Choose one of the following:</p> <ul style="list-style-type: none">• Y — Yes, you would like to use your Auxiliary Reference File.• N — No, you would not like to use your Auxiliary Reference File.• Blank - Default is Y.
File Location	<p>Optional. Code indicating where to write the auxiliary file in the output:</p> <ul style="list-style-type: none">• N — Write record to the NCO file.• C — Write record to the COK file.• Blank — Default is N.

Function Keys

Function Key	Name	Description
F3	Exit	Exit from the EWS File Conversion screen, without saving the data.
F6	Submit	Submit this job.
F7	Parm Test	Submit this job to only test the parameter records that have been generated for this job.
F8	Run BUILD Report	Submit the Build Report job.

If CODE-1 Plus detects an EWS file in the database library, the filename is automatically filled in, and CODE-1 Plus will create an override for G1C1AUX.

EWS When Calling C1MATCHx or C1BMCBD

When calling C1MATCHx through a user-defined program, you must populate P9IAUX as defined in the Input Call Area (P9IN).

When using C1BMCBD to activate and match to the Auxiliary File, you must include the AUXIL1 parameter in your CODE-1 Plus batch job. This is not the same parameter used in the C1AUXBLD program. The AUXIL1 parameter for the CODE-1 Plus batch driver is as follows:

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5  
  
AUXIL1.....
```

When calling C1MATCHx or C1BMCBD, you must make the Auxiliary File known to CODE-1 Plus by defining it in your job control set-up script as G1C1AUX. This file definition should be overridden to the file you created using the C1AUXBLD program described earlier in this chapter.

Note: The Auxiliary matcher is not available as a stand-alone program or as a callable routine.

Auxiliary File Reports

In this section, we describe the two reports that are generated when using the Auxiliary File Option in CODE-1 Plus.

Auxiliary File Build (C1AUXBLD) Reports

The Auxiliary File Build program (C1AUXBLD), generates a standard Precisely job report (PRNTRPT) and an execution log (PRNTXLG). The report lists the parameter given and the control totals for the job. The execution log shows when the job started and ended. You should check both reports for any error messages.

Note: Because of the way the Auxiliary File is built for use by CODE-1 Plus, the number of records read will not equal the number of physical records written to the output G1C1AUX Auxiliary File.

Auxiliary File Build Report

You will find the following information on this report:

- Parameter given
- Control totals for your Auxiliary File build job

Auxiliary File Build Execution Log

You will find the following information on the execution log:

- The date and time of the Auxiliary File build
- The number of records read
- The number of virtual records written
- The number of physical records written

Auxiliary File Reporting in the CODE-1 Plus Matcher

There are no new or separate reports from the CODE-1 Plus matcher as a result of Auxiliary File matching. The records presented to the CODE-1 Plus matcher that match to the Auxiliary File will show on a new line of the Control Totals Report under the heading “Confirmed via Match to Auxiliary File.” These records will not be included in the counts for any of the following major headings on the Control Totals Report:

- Total records for which Address Match attempted
- Total Unmatched Records
- Total Records successfully Matched.

Another new report line, “Total records Matched to EWS,” will appear on the Control Totals Report when there are EWS matching records. This count will also appear on the PS Form 3553 in Section E under the heading of EWS.

19 - Using PreciselyID Processing

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What is PreciselyID Processing?

For each addressable location, PreciselyID processing provides a unique and persistent identifier to reference the address without storing the whole address string. The PreciselyID is further verification an address exists, regardless of DPV matching. If the optional PreciselyID database is installed, processing is available in Batch and Interactive. For detailed information, please refer to your *CODE-1 Plus Installation Guide*.

Additionally, to link the PreciselyID to other data (i.e., geoenrichment), Precisely has done the complex matching for you. Use the PreciselyID as the gateway to the rest of the Precisely data portfolio. Contact your Sales Representative for more information, based on your specific needs.

How Does PreciselyID Processing Work?

These steps describe the sequence of CODE-1 Plus PreciselyID processing:

- 1. CODE-1 Plus validates the addresses in your input file during processing.
- 2. CODE-1 Plus looks up the output address in the PreciselyID database.
- 3. PreciselyID processing returns a code indicating if a PreciselyID was returned, and if it applied to the full address.

Structures Containing PreciselyID Identifiers

These structures include data to facilitate PreciselyID processing. For more detail, refer to your CODE-1 Plus Reference Guide.

Position	Name	Length	Content
537	P9IPRECISELYID	1	Indicates whether CODE-1 Plus should retrieve and return the PreciselyID. Y - Retrieve and return PreciselyID information

P9 OUT

Position	Name	Length	Content
4883	9OPRECISELYID\u0002STATUS	1	PreciselyID Status
4884- 4901	9OPRECISELYID\u0002RELEASE-NAME	18	PreciselyID Release Name
4902- 4905	9OPRECISELYID\u0002RELEASE-NUM	4	PreciselyID Release Number
4906- 4915	9OPRECISELYID\u0002RELEASE-DATE	10	PreciselyID Release Date
4916- 4927	9OPRECISELYID\u0002PBKEY	12	PreciselyID

Installing the PreciselyID Database

The PreciselyID Option is installed as part of your standard CODE-1 Plus installation. After installing CODE-1 Plus, you must install the PRCSLYDB database and activate the PreciselyID Option to perform PreciselyID processing. To activate, use the SA2OUT parameter or the Matcher/Inquiry system.

To install the PreciselyID file, follow these steps.

1. From the Work With Jobs screen, press **F20** to access Database Functions.
2. From the Database Functions screen, select **2. Install Database**.
3. On the Install CODE-1 Plus Databases screen, enter **Y** in the "Install PreciselyID DB?" field.
4. When you finish using the database functions, press F3 to return to the *Work with Jobs* screen (C1CPMM03).

Activating the PreciselyID Option

After installing the PreciselyID database and enabling the processing, you can use PreciselyID in your CODE-1 Plus processing. Use the SA2OUT parameter to activate and define options for PreciselyID processing. The SA2OUT parameter is defined in the Name/Address Record Posting function (C1CPOD050).

PreciselyID Reports

When the optional PreciselyID processing is enabled, the Control Totals report displays additional PreciselyID match statistics such as the total number of match attempts, successful and unsuccessful matches, and the number of exact and default matches found.

A - Glossary

Alphabetic character

Any one of the letters A through Z (upper case and lower case).

Alphanumeric character

Any one of the alphabetic characters, or any one of the digits 0 through 9.

Batch job

A batch job consists of a predefined group of processing actions that are done with little or no interaction between a user and the system. A user puts the batch job on a job queue (or list), where it waits until the system is ready for it.

Bit

A unit of data used to make up the bytes of information to be used in processing. Either of the binary digits 0 or 1.

Byte

A group of 8 adjacent bits. In the EBCDIC and ASCII coding systems, 1 byte represents a character, such as 1 letter in the alphabet. In the double-byte coding system, 2 bytes represent a character.

Character

Any letter, number or other symbol in the data character set that is part of the organization, control, or representation of data.

Carrier code

A code assigned to each address on a mail carrier's route.

Coded output file

Output file that contains processed records coded with ZIP + 4 and/or carrier route codes.

Constant

Data that has an unchanging, predefined value to be used in processing. A constant does not change during the running of the program, while the contents of a field or variable can.

Customer file

An input or output file that contains customer's names and addresses.

Default value

A value supplied by the system that is used when no other value is specified by the user.

Directional

A prefix or suffix on an address that identifies a direction. Predirectionals precede street names, such as W. Terry Avenue. Post directionals follow street names, such as 23 Democracy Avenue, NW.

Dropped address information

Address elements dropped during the matching process.

Embedded blank

A space between the characters in a unit of data.

Exit routine

Programming that enables another routine or module, separate from CODE-1 Plus, to execute a series of operations and then return to CODE-1 Plus.

Field

A group of related characters (such as a name or amount) that are treated as a unit in a record.

File

A generic term for a set of related records treated as a unit.

Firm name

The company name associated with an address.

General delivery

Mail picked up at post offices by customers who do not use a post office box.

High-rise delivery point

An address in an apartment or office building that accepts mail for tenants or companies within the building.

Highway contract route

A mail route assigned to a private carrier on a contract basis. The post office sometimes assigns contracts for sparsely populated rural areas.

Input file

Contains variable data used for input. It is typically a name-and-address file, but may contain any type of data. The input file is described by the user. It may have any file attributes and may reside on either disk, diskette, or tape.

Invalid ZIP Code File

Output file that contains addresses that have invalid ZIP Codes.

Job description

A set of characters that defines how the system handles a job.

Job queue

A waiting list. In this case, a list of the jobs waiting for processing.

Library

An object on disk that serves as a directory of other objects. A library groups related objects, and enables you to find objects by name.

Leading zeros

Zeros that are place-holders to the left of numbers that are right-aligned and smaller than the specified field length.

List codes

A generic term for codes placed next to records in a file. A list code might be used to sort records or perform other operations that require codes to identify like records.

Match attempts

Number of tries the system made to match the input address.

Matching algorithm

Program logic that controls address matching.

Member

Different files within a library.

National character

One of the characters \$, @, #, or _ (underscore).

Numeric character

Any one of the digits 0 through 9.

Packed data

Data that is in a packed decimal format.

Packed field

A field that contains data in packed decimal format.

Packed decimal format

Representation of a decimal value in which each byte within a field represents two numeric digits except the rightmost byte, which contains one digit in bits 0 through 3 and the sign in bits 4 through 7. For all other bytes, bits 0 through 3 represent one digit; bits 4 through 7 represent one digit. For example, the decimal value for +123 would be represented as 0001 0010 0011 1100 in binary notation, or X'123C' in hexadecimal notation. Note that some computers use alternative representations for packed decimal numbers.

Parameter

Data passed to or received from another program.

PreciselyID

A unique and persistent identifier to reference the address without storing the whole address string. The PreciselyID is further verification an address exists, regardless of DPV matching. Additionally, to link it to other data (i.e., geoenrichment), Precisely has done the complex matching for you. Use the PreciselyID as the gateway to the rest of the Precisely data portfolio.

Record

A collection of related data or words, treated as a unit, such as one name, address, and telephone number.

Record layout

Layout of a record, showing all the fields it contains along with each field's length, type, and position in the record.

Record position

The position in a record where a field is located.

Record types

The Postal Service categorizes addresses and assigns each category a code called a record type. For example a rural route is assigned a record type of "R."

Return codes

Codes produced by the system that indicate matching success and either changes made or discrepancies found in the input address during matching.

Rural route

A delivery route operated in communities lacking convenient postal facilities and maintained by area residents.

Uncoded output file

Output file that contains processed records left uncoded with either ZIP + 4 or carrier route codes.

ZIP Code

A 5-digit code identifying the post office or delivery station associated with an address.

ZIP + 4 Code

A 4-digit code added to a ZIP Code. The first two digits designate a sector that corresponds to a portion of a zone, rural route, several city blocks, or a large building. A company on one floor of a large office building can have its own ZIP + 4 Code.

In this section



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