

NCOA^{Link}® Layout 800

Input Data	Begin	End	Length	Description
Client input data	1	200	200	Original input data padded to 200 characters. For lists with a record length greater than 200 characters, the original input data will be padded to the next higher multiple of 100. All subsequent fields will be moved accordingly.
Standardized Data	Begin	End	Length	Description
std_deladr	201	248	48	Standardized delivery address
std_secadr	249	278	30	Standardized secondary address
std_urban	279	318	40	Urbanization (for Puerto Rico addresses)
std_city	319	346	28	Standardized city name
std_city13	347	359	13	Standardized 13-character city name as provided by USPS®
std_state	360	361	2	Standardized state
std_zip	362	366	5	Standardized USPS 5-digit ZIP Code™
std_zip4	367	370	4	ZIP + 4® or blank if ZIP + 4 not found
std_dlvpt	371	372	2	Delivery point
std_chkdgt	373	373	1	Legacy check digit
std_crrt	374	377	4	Carrier route code for standardized address
std_lotno	378	381	4	Line of Travel (LOT) number for carrier route mailings
std_lotord	382	382	1	LOT ascending or descending sort flag
std_status	383	388	6	Status/error codes (See Appendix A for status codes and Appendix B for error codes)
std_zipflg	389	389	1	ZIP Code change flag: 1 = ZIP Code not changed, address is in a valid range for input ZIP Code 2 = ZIP Code changed, address is in a valid range for new ZIP Code Blank = ZIP Code could not be validated for input address
std_lacind	390	390	1	LACS ^{Link} ® indicator: Y = Address might need 9-1-1 conversion (from box to street address) N = Address does not need conversion Blank = Address was not assigned (not ZIP + 4 coded)
std_z4ews	391	391	1	EWS flag Y = Matched to EWS file N = Not an EWS match EWS consists of records containing partial address information limited to the street name, pre- and post-directionals and a ZIP Code. For an address record to be EWS eligible, it must be an address not present on the most recent monthly production ZIP + 4 file.
std_adrtyp	392	392	1	Address match type: F = Company G = General delivery H = High-rise apartment or office building M = Military P = Post Office Box™ R = Rural route or highway contract S = Street Blank = Unassigned (not ZIP + 4 coded)
std_aptind	393	393	1	National Deliverability Index (NDI) scoring for apartment addresses 1 = Apartment address without apartment number 2 = Apartment address with apartment number (Affirmed) Blank = Not an apartment address
std_rrind	394	394	1	National Deliverability Index (NDI) scoring for RR/HC addresses 1 = RR/HC address without Box number 2 = RR/HC address with Box number (Affirmed) Blank = Not a RR/HC address
std_rsvd2	395	397	3	U.S. Congressional District
std_cntycd	398	400	3	Three digit county code
std_code	401	402	2	Flag of '00' to indicate if the address in std_deladr or std_secadr has been truncated. We suggest keeping the input address if this is '00'.
dpv_vacant	403	403	1	Indicates whether or not a record matched to the DPV® vacant table. An address that was active in the past, but not currently occupied (usually over 90 days) and is not receiving mail. The address could receive delivery again. Vacant does not apply to seasonal addresses. Y = Address is a vacant N = Address is not vacant Blank = Record not presented for vacant match (not ZIP + 4 coded)
dpv_flag	404	404	1	Indicates whether or not a record matched to the DPV database and match type N = No delivery point validation Y = Delivery point validated; primary number valid and secondary number (when present) valid S = Valid primary number; secondary number (primary for RR) present and not confirmed D = Valid primary number; input missing secondary number (primary for RR) M = Multiple match; no delivery point validation Blank = Record not presented for DPV match (not ZIP + 4 coded)
dpv_cmra	405	405	1	Indicates whether or not the address is a Commercial Mail Receiving Agency (CMRA) Y = Address is a CMRA N = Address is not a CMRA Blank = Record not presented for CMRA match (not ZIP + 4 coded)

dpv_ftnts	406	417	12	DPV footnotes: AA = Input address ZIP + 4 match A1 = Input address ZIP + 4 not matched BB = Input address DPV matched (all components) CC = Input address DPV primary number match, secondary number not DPV confirmed F1 = Input address matches a military address G1 = Input address matches a general delivery address M1 = Input address primary number missing M3 = Input address primary number invalid N1 = Input address DPV primary number match, high-rise address missing secondary number P1 = Input address missing PO, RR, or HC Box number P3 = Input address PO, RR, or HC Box number invalid R1 = Input address DPV matched to CMRA but PMB number not present RR = Input address DPV matched to CMRA U1 = Input address matches a unique address
lac_rtncod	418	419	2	Post Office LACS ^{Link} return codes: A = LACS ^{Link} record match, and a converted address is provided in the standardized address data fields 00 = No match, and no converted address 09 = LACS ^{Link} matched an input address to an old address, which is a 'highrise default' address, no new address is provided 14 = Found LACS ^{Link} record, but could not convert the data to a deliverable address 92 = LACS ^{Link} record matched after dropping the secondary number from input Blank = No LACS ^{Link} lookup attempted
ste_rtncd	420	421	2	USPS Suite ^{Link} return codes: A = Suite ^{Link} record match, suite information is added to the standardized address 00 = No match, and no suite information added Blank = No Suite ^{Link} lookup attempted
std_resvd	422	467	46	Reserved space (future use)
COA Data				
	Begin	End	Length	Description
coa_deladr	468	515	48	Delivery address
coa_urban	516	555	40	Urbanization (for Puerto Rico addresses)
coa_city	556	583	28	Standardized city name
coa_city13	584	596	13	Standardized 13-character city name as provided by USPS
coa_state	597	598	2	Standardized State
coa_zip	599	603	5	Standardized ZIP Code
coa_zip4	604	607	4	Standardized ZIP + 4
coa_dlvpt	608	609	2	Delivery point
coa_chkdgt	610	610	1	Legacy check digit
coa_crrt	611	614	4	Carrier route code for standardized address
coa_lotno	615	618	4	Line of Travel (LOT) number for carrier route mailings
coa_lotord	619	619	1	LOT ascending or descending sort flag
coa_lacind	620	620	1	LACS ^{Link} flag: Y = Address converted by LACS ^{Link} N = Address looked up with LACS ^{Link} but not converted S = A LACS ^{Link} conversion was made, but it was necessary to drop the secondary information Blank = No LACS ^{Link} lookup attempted (not ZIP + 4 coded)
coa_adrtyp	621	621	1	Address match type: F = Company G = General delivery H = High-rise apartment or office building M = Military P = Post Office Box R = Rural route or highway contract S = Street Blank = Unassigned (not ZIP + 4 coded)
coa_resvd1	622	630	9	U.S. Congressional District for new address
coa_movdat	631	636	6	Date NCOA ^{Link} move became effective (YYYYMM format)
coa_movtyp	637	637	1	Type of match made to NCOA ^{Link} database B = Business F = Family I = Individual P = Proprietary change-of-address (if optional service requested) R = LACS ^{Link} S = Suite ^{Link}

coa_dlvcod	638	638	1	USPS NCOA ^{Link} Delivery Code New Address is provided only for records with code "M", "S", "T" or "L" M = Forwardable move S = Forwardable move, secondary address cannot be confirmed K = Moved, left no forwarding address G = PO Box TM closed F = Moved to a foreign address P = Temporary move, or moved and new primary address can not be confirmed or converted to a deliverable address; no forwarding address provided L = LACS ^{Link} conversion T = Suite ^{Link} match
coa_chgind	639	639	1	Change flag. New address provided for records with "A" only A = New address provided (forwardable move, LACS ^{Link} update or Suite ^{Link} match) B = Possible move C = No match D = Moved; no new address available
coa_rtncod	640	641	2	USPS NCOA ^{Link} Return Codes (See Appendix C)
coa_cmra	642	642	1	Indicates whether or not the new address is a Commercial Mail Receiving Agency (CMRA) Y = New address is a CMRA N = New address is not a CMRA Blank = Record not presented for CMRA match (not ZIP + 4 coded)
coa_resvd2	643	651	9	Reserved space (future use)
coa_name	652	691	40	Name used for matching

Future Use	Begin	End	Length	Description
coa_resvd	692	736	45	Reserved space (future use)

DSF ^{2®} Data	Begin	End	Length	Description - filled only when DSF2 is requested
dsf2wkseq	737	744	8	Walk sequence number
dsf2adrtyp	745	745	1	Address type B = Business R = Residential G = General delivery U = Undetermined Blank = Non-match to DSF ²
dsf2eduind	746	745	1	Educational indicator Y = Address is an educational institution N = Address is not an educational institution Blank = Not looked up
dsf2dlvtyp	746	746	1	Delivery type code 1 = Curb - A delivery point with a mail receptacle located at the curb 2 = NDCBU - A delivery point that is serviced by cluster boxes, also known as Neighborhood Delivery and Collection Box Units (NDCBU) assigned to a bank of boxes or floors 3 = Central - A delivery point within a building that has two or more ZIP + 4 codes 4 = Door slot - A delivery point serviced by something other than Curb, NDCBU or Central Blank = Non-match to DSF ²
dsf2vacant	747	747	1	Vacant indicator Y = Location has been vacant for 90+ days N = Not a vacant address Blank = Not matched to DPV
dsf2season	748	748	1	Seasonal indicator Y = Seasonal address N = Not a seasonal address Blank = Not matched to DPV
dsf2thrwbk	749	749	1	Throwback indicator Y = PO Box Delivery: The address associated with this delivery point is a street address, but delivery is made to the customer's PO Box address. NOTE: The carrier does not deliver mail to the street or rural route / highway contract box address. The USPS may not deliver mail addressed for the street delivery point to the PO Box unless the PO Box is included in the address. DSF ² will not cross-reference the street address to the appropriate PO Box. N = Not a throwback address Blank = Non-match to DSF ²
dsf2drpind	750	750	1	Delivery point drop indicator The delivery point drop indicator specifies whether or not a delivery point is a drop site A drop is a single delivery point or receptacle that services multiple families and/or business. The site distributes mail for a drop site internally. Commercial mailbox companies or Commercial Mail Receiving Agencies (CMRA's) are also classified as drop sites because the carrier delivers the mail to one point, and the company distributes mail to special boxes. Y = Delivery point is a drop N = Delivery point is not a drop Blank = Non-match to DSF ²
dsf2drpcnt	751	753	3	Number of Deliveries at the Drop
dsf2nostat	754	754	1	USPS no stats indicator Y = Update may be needed within the USPS delivery database N = No update needed within the USPS delivery database Blank = Non-match to DSF ²

dsf2score	755	756	2	Mail Score - Currently a score of 5 is not returned 1 = Address matched to the DSF2 file 2 = Address marked as a seasonal address 3 = Primary address matched the DSF2 file. However, the secondary address did not match to the DSF2 file. This address may or may not be deliverable. 4 = Address did not match the DSF2 file. Primary information is missing or invalid and prevented a direct match to the DSF2 file. Record may be undeliverable. 6 = Address marked as being vacant for 90 or more days. Address information is accurate but is undeliverable. 7 = Address has serious problems that prevent a match to DSF2 and ZIP + 4 files Address fields may be incomplete, or contain junk data
dsf_resvd	758	761	4	Reserved space (future use)
Telephone				
Begin	End	Length	Description - filled only when telephone service is requested	
std_phone	762	771	10	Phone number
Optional Flags				
Begin	End	Length	Description - filled only when optional services are requested	
opt_flags	772	779	8	Optional return codes A = Advanced Address Correction U = Apartment/unit number corrected or appended B or P = Proprietary change of address
Suppression Flags				
Begin	End	Length	Description - filled only when suppression/s are requested	
supp_flags	780	789	10	Suppression & duplicate identification flags A = Deceased B = DMA Do not mail C = Prison D = Duplicate record E = Keep record F = Non duplicate
Gender Flag				
Begin	End	Length	Description	
std_gender	790	790	1	Gender Code B = Both C = Company F = Female M = Male U = Unknown/undetermined Blank = No input name
Future Use				
Begin	End	Length	Description	
resvd1	791	800	10	Reserved space (future use)



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Appendix A

Status Codes

A status code tells you how an address was corrected or standardized. The code contains six characters, and each character tells you something about how the record was changed.

Value	What Changed
1st Character	
S	Nothing was truncated
A	The address line was truncated to fit in your field
B	The address line and city name were truncated to fit in your fields
C	The city name was truncated to fit in your field
2nd Character	
0	No significant change to the city, state, ZIP™, or ZIP + 4
1	ZIP
2	City
3	City and ZIP
4	State
5	State and ZIP
6	City and state
7	City, state, and ZIP
8	ZIP + 4
9	ZIP and ZIP + 4
A	City and ZIP + 4
B	City, ZIP, and ZIP + 4
C	State and ZIP + 4
D	State, ZIP, and ZIP + 4
E	City, state, and ZIP + 4
F	City, state, ZIP and ZIP + 4
3rd Character	
0	No significant change to the predirectional, primary (street) name, postdirectional, or suffix
1	Suffix
2	Predirectional
3	Predirectional and suffix
4	Postdirectional
5	Suffix and postdirectional
6	Predirectional and postdirectional
7	Predirectional, suffix, and postdirectional
8	Primary name
9	Primary name and suffix
A	Predirectional and primary name
B	Predirectional, primary name, and suffix
C	Primary name and postdirectional
D	Primary name, suffix, and postdirectional
E	Predirectional, primary name, and postdirectional
F	Predirectional, primary name, postdirectional, and suffix
4th Character	
0	No change in county, carrier route, DP2 and/or DPC, or unit designator
1	Unit designator
2	DP2 and/or DPC
3	DP2 and/or DPC and unit designator
4	Carrier route
5	Carrier route and unit designator
6	Carrier route, and DP2, and/or DPC
7	Carrier route, and DP2 and/or DPC, and unit designator
8	County number
9	County number and unit designator
A	County number, and DP2, and/or DPC
B	County number, DP2 and/or DPC, and unit designator
C	County number and carrier route
D	County number, carrier route, and unit designator
E	County number, carrier route, and DP2, and/or DPC
F	County number, carrier route, and DP2 and/or DPC, and unit designator
5th Character	
0	No change to the LOT (line of travel), LOT Order (line of travel order), or Urb (Urbanization code)
1	LOT
2	LOT Order
3	LOT and LOT Order
4	Urb
5	Urb and LOT
6	Urb and LOT Order
7	Urb, LOT, and LOT Order
6th Character	
n/a	This character is reserved for future expansion of the status code. It will always be zero.

Appendix B

Error Codes

Code	Description
E101	The data contains either 1) no last-line data at all, 2) only a city name, or 3) only a state. There is not enough last-line data to justify going any further with the assignment process.
E212	The input data does not include a recognizable city name, so look-up in the City directory is impossible. The input data includes a ZIP Code, but no match for it can be found in the ZCF directory. This error does not indicate whether or not the state data is valid.
E213	The input data includes a valid state and something that might be a city name, but no match for them can be found in the City directory. The input data does not include a ZIP Code, so no look-up in the ZCF directory is possible.
E214	The input data includes something that might be a city name, and something that might be a ZIP Code. However, both of them are invalid, because no match for either of them can be found in the City and ZCF directories.
E216	The input data may or may not include a ZIP Code. If a ZIP is input, no match for it can be found in the ZCF directory. When looking up the input city and state in the city directory, the software finds two or more matching cities in the state. Because the input ZIP is invalid or missing, the software cannot break the tie between possible city matches, nor determine which ZIP to assign.
E302	Nothing in the input record is recognized as a primary address line.
E412	No match for the input street name can be found in the ZIP+4 directory. Perhaps the street name is misspelled or incorrectly abbreviated. If the input address line contains extraneous data that might be interpreted as a part of the street name, this also can result in E412.
E413	The ZIP+4 directory contains two or more street names that resemble the input street name. However, the resemblance between potential matches is so close that one cannot be chosen.
E420	Nothing in the input address line is recognized as a primary range (house number). This may mean that the primary range truly is missing, or that it cannot be recognized.
E421	According to the ZIP+4 directory, the input primary range (house number) is invalid. That is, it does not fall within any of the ranges listed for that street, route, or building.
E422	The ZIP+4 directory indicates that a predirectional is required to choose between possible matches. However, either the input data does not include a predirectional, or the input predirectional is invalid (not among those listed for the street).
E423	The ZIP+4 directory indicates that a suffix is required to choose between possible matches. However, either the input data does not include a suffix, or the input suffix is invalid (not among those listed for the street).
E425	The ZIP+4 directory indicates that both a suffix and a directional are required to choose between possible matches. However, either the input data does not include a suffix and directional, or the input suffix and directional are invalid (not among those listed for the street).
E427	The ZIP+4 directory indicates that a postdirectional is required to choose between possible matches. However, either the input data does not include a postdirectional, or the input postdirectional is invalid (not among those listed for the street).
E428	The input ZIP is missing or invalid. The City directory shows that the input city/state covers two or more ZIP Codes. The ZIP+4 directory has matches for the address line in at least two of those ZIP Codes. The software can't use the invalid input ZIP to break the tie on the address line, nor use the address line to choose a valid ZIP.
E429	The input city name is missing or invalid. The ZCF directory shows that the input ZIP applies to two or more city names. The ZIP+4 directory has matches for the address line in at least two of those cities. The software can't use the input city to break the tie on the address line, nor use the address line to choose a city name.
E430	The ZIP+4 directory contains two or more address lines that are similar to the input address line. However, the similarity between potential matches is so close that one cannot be chosen over another.
E431	The ZIP+4 directory contains two or more address lines that resemble the input address line. To break the tie, the Puerto Rican urbanization is needed. However, either the input address does not include an urbanization, or the input urbanization is incorrect.
E439	Exact match made in EWS directory
E500	E500 is a catch-all error code assigned when no more specific code can be assigned. Usually it indicates that no potential match meets the minimum confidence level, or that there is an unresolved tie between two or more potential matches.
E501	The address is foreign—that is, not within the domestic U.S., territories, or possessions.
E502	All of the fields used in address look-up are blank. There may be data in non-address fields.
E503	The input address lies outside the area covered by the ZIP+4 directory. This error usually occurs when a state or regional ZIP+4 directory is being used, or a custom directory created through the Extract utility. E503 should not occur when using the National directory (zip4us.dir). If it does, it may mean that you have found a conflict between the City and ZCF directories and the National directory. You should report it to your Address Management Systems Office by sending them an e-mail (amssupport.ncsc@usps.gov).
E504	The address line matches at least two ZIP+4 records. The ranges of those ZIP+4 records overlap, and the software cannot break the tie. E504 indicates a flaw in the ZIP+4 database. You should report it to your Address Management Systems Office by sending them an e-mail (amssupport.ncsc@usps.gov).
E505	The record matches an undeliverable default record. If further information were provided, such as secondary address data or firm name, the address would have been assigned.
E600	According to the USPS, no delivery to this address is possible. The address is listed in the ZIP+4 directory, but the record is tagged as undeliverable by the USPS. Most often, it might be a cemetery, parking ramp, or condemned building. E600 is unusual because it indicates a successful match to the ZIP+4 directory. All other error codes mean that there was no match. Undeliverable addresses are tagged as "errors" for the convenience of users who suppress mailing to "bad" addresses—unassigned and undeliverable records.
E601	Not a valid delivery point. ZIP+4 removed.

Note: Some addresses that are valid may be marked incorrectly as undeliverable. This is caused by an error in the USPS data. If you find such an address, you should report it to your Address Management Systems Office by sending them an e-mail (amssupport.ncsc@usps.gov).

Appendix C

NCOA^{Link} Return Codes

A = COA match

The input record matched to a business, individual or family type master file record. A new address could be returned.

00 = No match

The input record could not be matched to a master file record. A new address could not be returned.

01 = Found COA: Foreign move

The input record matched to a business, individual or family type master file record but the new address was outside USPS delivery area.

02 = Found COA: Moved left no address (MLNA)

The input record matched to a business, individual or family type master file record and the new address was not provided to USPS.

03 = Found COA: Box closed no order (BCNO)

The input record matched to a business, individual or family type master file record which contains an old address of PO Box that has been closed without a forwarding address provided.

04 = Cannot match COA: Street address with secondary

In the Standard mode utilizing Family matching logic, the input record matched to a family record type on the master file with an old address that contained secondary information which obtained a ZIP + 4 street level match. The input record does not contain secondary information. This address match situation requires individual name matching logic to obtain a match and individual names do not match.

05 = Found COA: New 11-digit DPBC is ambiguous

The input record matched to a business, individual or family type master file record. The new address on the master file record could not be converted to a deliverable address because the DPBC represents more than one delivery point.

06 = Cannot match COA: Conflicting directions: Middle name related

There is more than one COA (individual or family type) record for the match algorithm and the middle names or initials on the COAs are different. Therefore, a single match result could not be determined.

07 = Cannot match COA: Conflicting directions: Gender related

There is more than one COA (individual or family type) record for the match algorithm and the genders of the names on the COAs are different. Therefore, a single match result could not be determined.

08 = Cannot match COA: Other conflicting instructions

The input record matched to two master file (business, individual or family type) records. The two records in the master file were compared and due to differences in the new addresses, a match could not be made.

09 = Cannot match COA: High-rise default

The input record matched to a family record on the master file from a high-rise address ZIP + 4 coded to the building default. This address match situation requires individual name matching logic to obtain a match and individual names do not match.

10 = Cannot match COA: Rural default

The input record matched to a family record on the master file from a Rural Route or Highway Contract Route address ZIP + 4 coded to the route default. This address situation requires individual name matching logic to obtain a match and individual names do not match.

11 = Cannot match COA: Individual match: Insufficient COA name for match

There is a master file (individual or family type) record with the same surname and address but there is insufficient name information on the master file record to produce a match using individual matching logic.

12 = Cannot match COA: Middle name test failed

The input record matched to an individual or family record on the master file with the same address and surname. However, a match cannot be made because the input name contains a conflict with the middle name or initials on the master file record.

13 = Cannot match COA: Gender test failed

The input record matched to a master file (individual or family type) record. A match cannot be made because the gender of the name on the input record conflicts with the gender of the name on the master file record.

14 = Found COA: New address would not convert at run time

The input record matched to a master file (business, individual or family type) record. The new address could not be converted to a deliverable address.

15 = Cannot match COA: Individual name insufficient

There is a master file record with the same address and surname. A match cannot be made because the input record does not contain a first name or contains initials only.

16 = Cannot match COA: Secondary number discrepancy.

The input record matched to a street level individual or family type record. However, a match is prohibited based on 1 of the following reasons: 1) There is conflicting secondary information on the input and master file record; 2) the input record contained secondary information and matched to a family record that does not contain secondary information. In item 2, this address match situation requires individual name matching logic to obtain a COA match and individual names do not match.

17 = Cannot match COA: Other insufficient name

The input record matched to an individual or family master file record. The input name is different or not sufficient enough to produce a match.

18 = Cannot match COA: General delivery

The input record matched to a family record on the master file from a General Delivery address. This address situation requires individual name matching logic to obtain a match and individual names do not match.

19 = Found COA: New Address not ZIP + 4 coded.

New address primary number not DPV confirmable or Temporary Change Of Address. There is a change of address on file but the new address cannot be ZIP + 4 coded and therefore there is no 11-digit DPBC to store or return, the new address primary number cannot be confirmed on DPV or the new address is temporary

20 = Cannot match COA: Conflicting directions after re-chaining

Multiple master file records were potential matches for the input record. The master file records contained different new addresses and a single match result could not be determined.

66 = Daily delete

The input record matched to a business, individual or family type match that is present in the daily delete file. No change is returned. Records in the daily delete file are pending deletion. Reasons include the following: move was filed as family when it should have been individual, move filed that should not have been, mistakes in data provided to the USPS.

91 = COA Match: Secondary number dropped from COA

The input record matched to a master file record. The master file record had a secondary number and the input address did not. The record is a ZIP + 4 street level match.

92 = COA Match: Secondary number dropped from input address

The input record matched to a master file record, but the input address had a secondary number and the master file record did not. The record is a ZIP + 4 street level match.