Mail*DPV – user's guide

Mail*DPV

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DPV – Delivery Point Validation Requirement

United States Postal Service Delivery Point Validation certifies that an address actually receives postal delivery. CASS certification is limited to verifying that an address is in a valid Zip+4 range, but does not certify that the address actually exists or if the address is a stop on a USPS carrier route. For example:

> 702 W OAK ST
> DENTON TX 76201

While 702 W OAK ST can be matched in DENTON TX to Zip+4 range of 700-798, 702 is not DPV valid. Doors 700 and 704 are DPV valid delivery points on this street, while 702 is not. After CASS Zip+4 address certification, DPV validation verifies that the matched address actually has delivery service.

There are currently more than 150 million USPS delivery points including PO BOX, Rural Route, street, high-rise and firm address types.

DPV validation is required for CASS certification. Addresses matched to USPS Zip+4 records that are not DPV valid, cannot be bar-coded. Matched addresses will still be standardized making all corrections necessary. Unless the address is DPV valid, it will not qualify for Mail-Automation rates and will not be assigned a Zip+4.

Address Enhancement

DPV validation identifies addresses that are at risk of causing return mail and diagnoses the risk. Mail*LIST permits selection of high-risk addresses from address lists by cause and then passes selected addresses to Mail*STAR where problems can be resolved minimizing return mail.

Address Status

Matched addresses have a status of one to 4 stars interpreted as:
'*'   Matched Zip+4 indicates that the address is not deliverable
'**'   Matched Zip+4 is not DPV valid
'***'   Matched Zip+4 is DPV valid, but the high-rise secondary number is missing or invalid
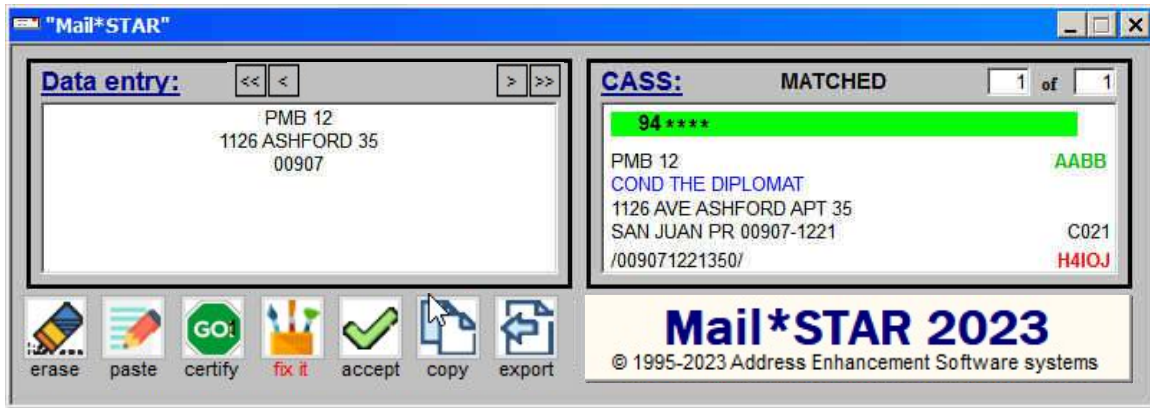'****'   Matched Zip+4 is totally DPV valid

DPV Restriction

The USPS does not permit the use of DPV validation to artificially create address lists. A system of "False-Positive" addresses insures that DPV validation is used as intended. On encountering a "False-Positive" address, the licensee must contact AES for reactivation.

Mail*STAR when invoked by Mail*LIST

The example below shows Mail*STAR invoked by Mail*LIST with the criteria, "CASS certified addresses".

<Click> of the DPV valid status, "3", as shown below displays the standard USPS footnotes. Refer to the appendix for a complete list of DPV validation codes and footnotes. The first three columns denote:

1. DPV valid primary code in the domain {N,Y,S,D} where:
    - N – Not DPV valid
    - Y – DPV valid all components
    - S – DPV valid primary but secondary not validated
    - D – DPV valid primary but secondary not present
2. CMRA location in the domain {Y,N} or is blank if DPV valid is 'N'
3. False Positive in the domain {Y,N} or is blank if DPV valid is not 'N'
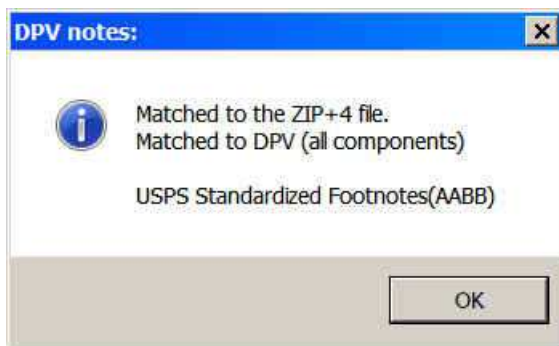
Mail*STAR Standalone or Invoked by Mail*LIST

The address below was CASS certified with one unambiguous match. DPV validation status is reported using standard USPS footnotes right justified and below the reliability bar. The standard footnotes are green if all components are DPV valid, otherwise red.

<CTRL><Right-Click> of the CASS block opens a window explaining the address's DPV status.

The DPV validation notes report on the visible address. The "1 of 1" indicates that there is only one address solution available. When multiple address solutions exist, as demonstrated in the next section, the DPV validation notes report on the selected address.

Extraneous PMB Anomaly

Please note the absence of a CMRA, Commercial Mail Receiving Agency, footnote, {RR, R1}. The USPS does not provide footnotes for extraneous PMB's. Although the address is 100% DPV valid, it is not the address of a CMRA.

When there is a private mailbox sequence in an address matching a Commercial Mail Receiving Agency, you will also se a "RR" on the USPS footnote – "AABBRR". If the "RR" is not part of the footnote, the PMB sequence is extraneous.
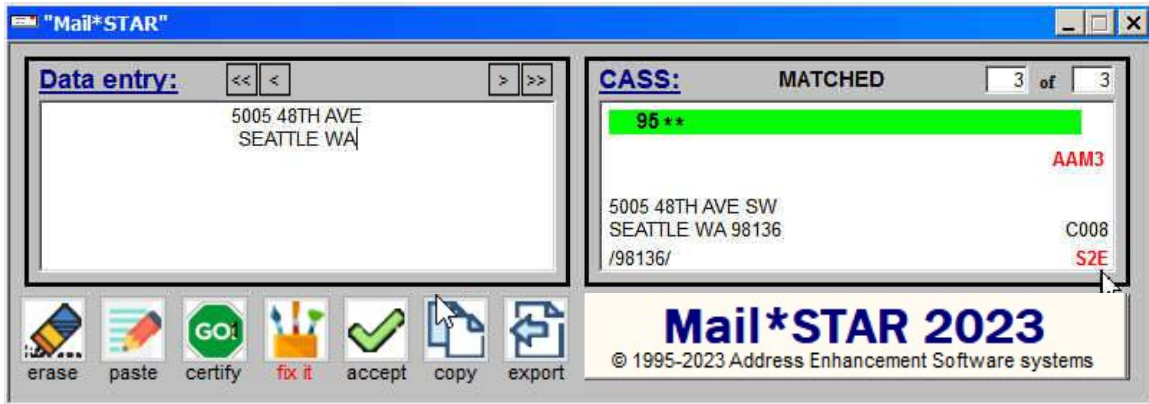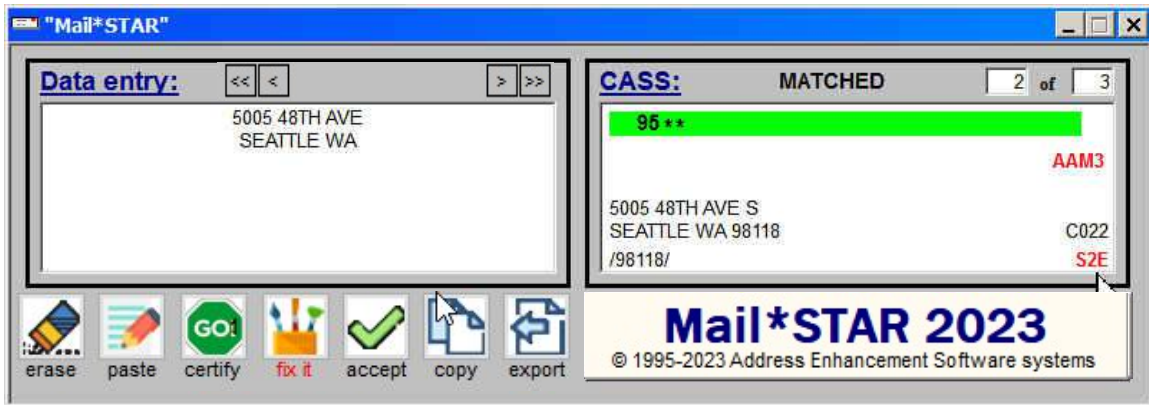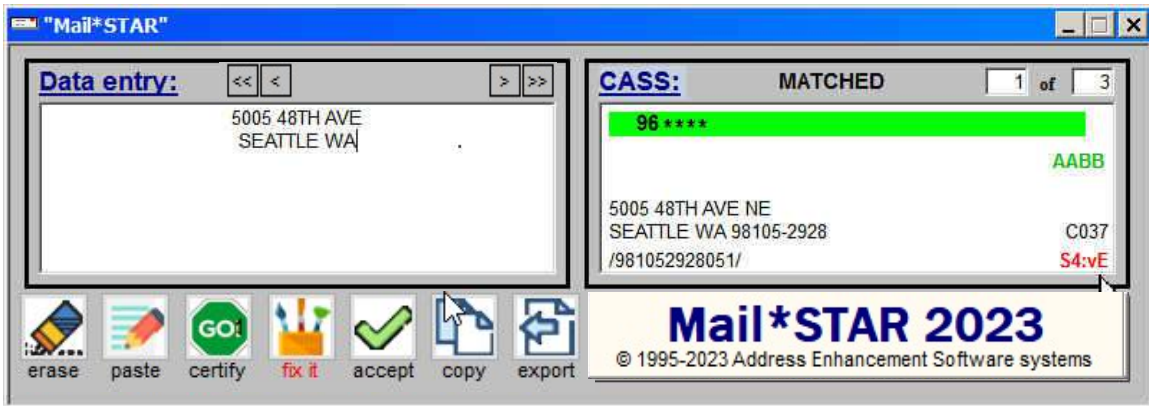
DPV Validate for Breaking Ties

The following input address has three CASS solutions. Mail*STAR broke the tie and bumped the reliability of the winner by one point. The address quality flag has ":v" added.

When a tiebreaker is required to make an address pick, the tiebreaker used is reported using a flag starting with ":" plus a single lower case character indicating which tiebreaker was used. The flag ":v" reports that DPV validation was used to break the tie.
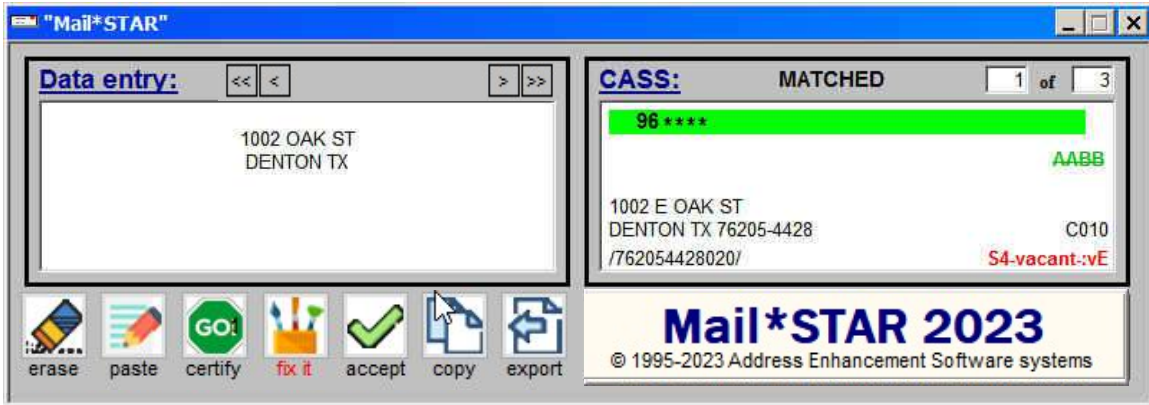
The following snapshots show the three CASS solutions, but only the first one is a DPV valid address. Without DPV validation, this input address could not be certified.

Mail*LIST permits the use of any criteria selecting addresses to be passed to Mail*STAR for review. The site can elect to review all addresses that required DPV validation to break a tie by specifying criteria where the address quality flags contain ":v".
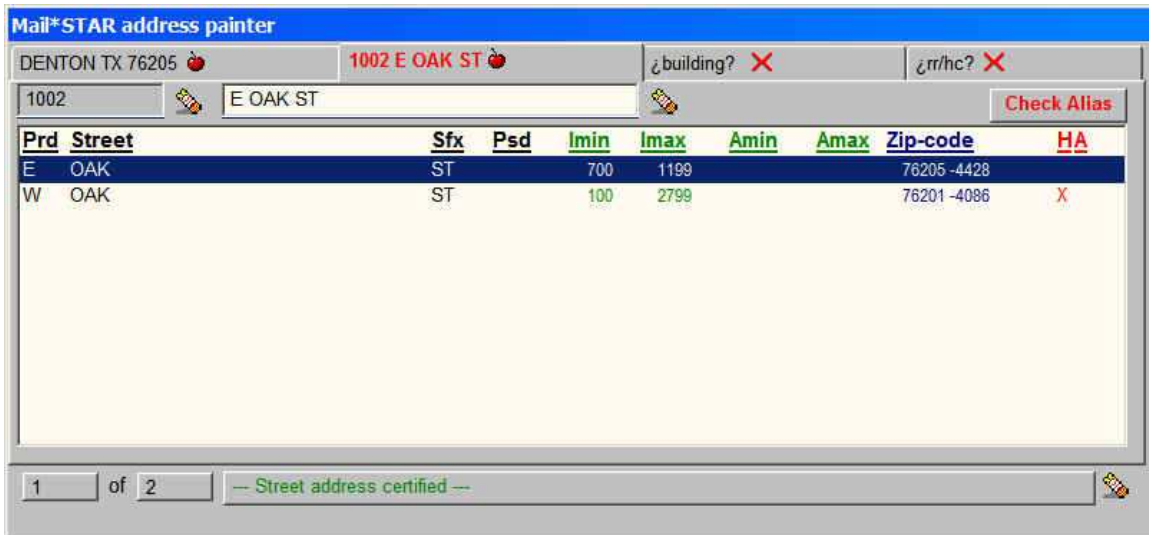
DPV Validation and the Address Painter

The address painter permits DPV validation in the address solution data windows for Zip code, street, high-rise and rural route interactively.

Using the address painter to find the address…

… and <CTRL><Right-Click> on the highlighted row, reports of the DPV validation status.

Appendix A – USPS Standardized Footnotes

Mail*LIST and Mail*STAR are required to express DPV results using USPS defined standard two character footnotes.

First set of footnotes relates to simple CASS Zip+4 certification.

> AA Input Address Matched to the ZIP+4 file
>
> A1 Input Address Not Matched to the ZIP+4 file

Second set of footnotes are standard DPV validation observations.

> BB – Input Address Matched to DPV (all components)
>
> CC – Primary number matched to DPV, but secondary number not matched
>
> N1 – Primary Number Matched to DPV but Address Missing Secondary Number
>
> M1 – Primary number missing
>
> M3 – Non-postal Primary number invalid
>
> P1 – Input Address RR or HC Box number Missing
>
> P3 – Input Address PO, RR, or HC Box number Invalid
>
> F1– Input Address Matched to a Military Address
>
> G1– Input Address Matched to a General Delivery Address
>
> U1– Input Address Matched to a Unique ZIP Code

Third set of footnotes are DPV validation observations relating to CMRA locations. The USPS definition of a CMRA is:

> *A commercial mail-receiving agency (CMRA) is a private business that acts as the mail-receiving agent for specific clients by providing a delivery address and other services.*

If the address matches to a CMRA location one of the following footnotes will appear.

> RR– Input Address Matched to CMRA and PMB designator present
>
> R1– Input Address Matched to CMRA but PMB designator not present

Appendix B – DPV Valid Code

DPV validation code is an unsigned character. This byte is bit-mapped as follows.

Null DPV – unknown state – beginning state of imported address

- Unknown   all bits set   255

False Positive – exceedingly rare bad karma event

- False Positive: bit-7 set   128   all other bits reset

Carrier Route Coded – matched address with not-deliverable Zip+4

- CRT coded w/o Zip+4:   bit-6 set   64   all other bits reset

DPV Valid - (code & 3) - bitmap summary when bits 0 and or 1 set

- DPV_VACANT   bits-0 and/or bit-1 set 64
- DPV_NO_STAT   bits-0 and/or bit-1 set 32
- Input PMB present: bit-3 set   8
- CMRA location: bit-2 set   4
- DPV totally valid   bit-0 set bit-1 set   3
- DPV valid w/o secondary: bit-0 reset bit-1 set 2
- DPV valid default: bit-0 set bit-1 reset 1

DPV Invalid - !(code & 3) - bitmap summary when bits 0 and 1 reset

- Military w/o primary: bit-4 set bit-5 set   48
- POB or RR w/o primary: bit-4 reset bit-5 set 32
- Physical w/o primary: bit-4 set bit-5 reset 16
- Input PMB present: bit-3 set   8
- No Zip+4 match: bit-2 set   4
- No DPV verification: bit-0 reset bit-1 reset 0

DPV valid codes:

The three single character codes associated with DPV validation are set only if the address has been Zip+4 certified. These characters are referenced here as:

- DPV valid   {' ','Y','S','D','N'}
  - blank when the address was not matched -- ((code & 7) == 4)
  - 'N' when certified but NOT DPV valid -- ((code & 7) == 0)
  - 'Y' when certified and DPV valid all components -- ((code & 3) == 3)
  - 'S' when certified and DPV valid dropping secondary number -- ((code & 3) == 2)
  - 'D' when certified as a default Zip+4 record -- ((code & 3) == 1)
- CMRA   {' ','Y','N'}
  - blank if DPV valid is 'N' or the address was not matched
  - 'N' if DPV valid {'Y','S','D'} and not a CMRA location
  - 'Y' if DPV valid {'Y','S','D'} and is a CMRA location
- FP   {' ','Y','N'}
  - blank if DPV valid is {'Y','S','D'} or the address was not matched
  - 'N' if DPV valid is 'N' and not a False Positive hit
  - 'Y' if DPV valid is 'N' and there was a False Positive hit.