



THE UNIVERSITY *of*
NEW MEXICO

Address Verification Functionality in Banner INB

December 2008

Address Types Verified

1. All U.S. addresses entered into Banner General Person forms are verified against the Post Office database and formatted to PO standards
2. All U.S. addresses electronically loaded into Banner (tape loads, data imports) are verified and formatted in batch (overnight)
3. Addresses in Banner will be cleaned every night. Error reports identifying invalid addresses will be available on e~Print
4. All address types except for Campus Mail Stop Codes (MS) and Residence Hall (RH)

How does this benefit the University?

1. Reduces amount of mail returned as undeliverable
2. Reduces re-work in offices of re-entering and correcting addresses
3. Improves the accuracy and availability of communications with University correspondents
4. Zip+4, carrier route, and other address barcode information now available in Banner

How does this benefit *you*?

1. Reduces data entry for addresses – enter 3 pieces of information and software fills in the rest
2. Reduces time handling and logging returned mail
3. Automates correction of common typos and abbreviations such as Abq, Toas, and KAFB

Address Verification Functionality

- Only checks U.S. addresses (Nation field is blank)
- All address types will be verified except RH (Residence Hall) and MS (Mail Stop Code)
- Checks addresses against the U.S. Postal Service database of deliverable addresses, which is updated monthly
- Gives error code for invalid addresses.
Examples: Street Number Invalid, Suite/Apt Missing, Unknown Street

Address Formatting Functionality

The diagram illustrates the address formatting process. On the left, a form contains the following fields: Street Line 1 (1503 marin luther king), Street Line 2, Street Line 3, City, State or Province (dropdown), ZIP or Postal Code (87106), County, and Nation. A light blue arrow labeled 'tab' points to the right, where the same form is shown with the following fields: Street Line 1 (1503 Dr Martin Luther King Jr), Street Line 2, Street Line 3, City (Albuquerque), State or Province (NM dropdown, New Mexico), ZIP or Postal Code (87106-4505), County (001 dropdown, Bernalillo), and Nation.

- Formats addresses to match U.S. Postal Service standards (see Appendix A for complete list)
- Removes punctuation, standardizes street and directional abbreviations
- Fills in city and state fields
- Adds +4 to zip code
- Adds county code for NM addresses

Banner Forms Affected

- SPAIDEN
- PPAIDEN
- FOAIDEN
- GOAMTCH
- SAAQUIK
- SRAQUIK
- FTMAGCY
- FTMCUST
- FTMFMRGR
- FTMVEND

How to Use Address Verification

1. Enter Address Type (MA, BU, PE, etc.)
2. Enter Street Line 1
3. Enter Zip Code
4. Tab out of Zip Code field
5. City, New Mexico county code, and zip+4 are filled in, and the address is formatted correctly

How to Use Address Verification

1. Enter Address Type (MA, BU, PE, etc.)
2. Enter Street Line 1
3. Enter City
4. Enter State
5. Tab out of the State field
6. Zip+4 and the New Mexico county code are filled in, and the address is formatted correctly

Enter Address Type, Street Line 1, and Zip Code

Current Identification

Alternate Identification

Address

Telephone

Biogra

From Date:

10-MAR-2008



To Date:



Address Type:

MA



Mailing

Sequence number:

Street Line 1:

4819 idlewile

Street Line 2:

Street Line 3:

City:

State or Province:



ZIP or Postal Code:

87108



County:



Nation:



Tab out, and presto: a verified, formatted address!

Current Identification	Alternate Identification	Address	Telephone	Biographical	E-mail	Emer
From Date:	10-MAR-2008		To Date:			<input type="checkbox"/> Inactivate Address
Address Type:	MA	▼ Mailing	Source:		▼	
Sequence Number:	6					
Street Line 1:	4819 Idlewild Ln SE		Delivery Point:	19		
Street Line 2:			Correction Digit:	1		
Street Line 3:			Carrier Route:	C018		
City:	Albuquerque					
State or Province:	NM	▼ New Mexico				
ZIP or Postal Code:	87108-3516	▼				
County:	001	▼ Bernalillo				
Nation:		▼				
						Last Update

formatted

PO route info populated



populated

+4 added to zip code

populated

Or not...What it looks like if the address doesn't verify

Current Identification Alternate Identification **Address** Telephone Biogr.

From Date: 10-MAR-2008  **To Date:**  Ina

Address Type: MA Mailing **Source**

Sequence Number: 6

Street Line 1: 4819 edelwilde Do

Street Line 2: **Deliv**

Street Line 3: **corre**


City: **arr**


State or Province:

ZIP or Postal Code: 87108

County:

Nation: **Last**

Banner 

 Unknown Street






Common Types of Address Errors


(see Appendix B for complete list)


Error	Description
Address out of Range	The address was found but the street number in the input address was not between the low and high range for this street in the Post Office database.
Multiple Matches	More than one record matches the address and there is not enough information available in the input address to break the tie between multiple records. Additional information, such as city name, can help reduce the number of multiple match errors.
Non-Deliverable Address	The physical location exists but there are no homes on this street in the Post Office database. One reason might be railroad tracks or rivers running alongside this street, as they would prevent construction of homes in this location.
Suite/Apt Missing	Input address matched but secondary number (apartment or suite) is missing
Suite/Apt Invalid	Input address matched but secondary number (apartment or suite) is invalid
Unknown Street	An exact street name match could not be found and phonetically matching the street name resulted in either no matches or matches to more than one street name.
ZIP Code Error	The ZIP code entered does not exist and could not be determined by the city and state.

Error: Address Out of Range

Valid address range for this street is 1000-6000. The number entered (48019) is outside that range.






Current Identification	Alternate Identification	Address	Telephone	Biograph
From Date:	10-MAR-2008 	To Date:	<input type="text"/> 	<input type="checkbox"/> Inac
Address Type:	MA  Mailing			Source
Sequence Number:	<input type="text" value="6"/>			<input type="checkbox"/> Do M
Street Line 1:	<input type="text" value="48019 idlewilde"/>			Delive
Street Line 2:	<input type="text"/>			Correc
Street Line 3:	<input type="text"/>			Carrier
City:	<input type="text"/>			
State or Province:	<input type="text"/> 			
ZIP or Postal Code:	<input type="text" value="87108"/> 			

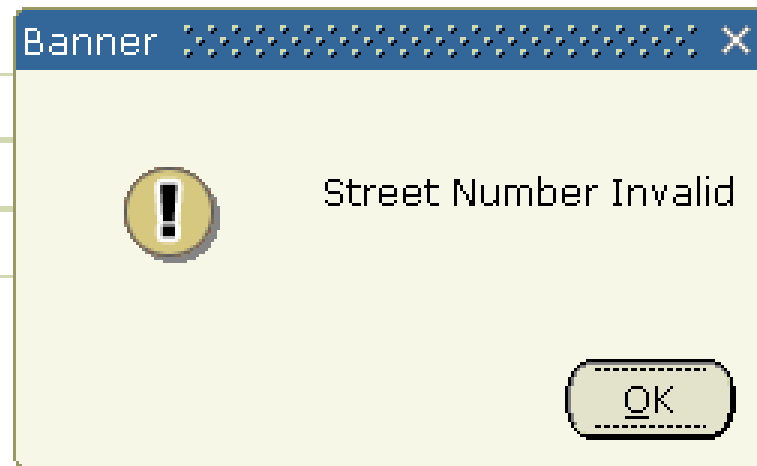
Banner 

 Address out of Range

Error: Street Number Invalid






Street number is within valid range for that street (1000-6000), but no house by that number (4817) exists in the database.


Current Identification	Alternate Identification	Address	Telephone	Biog
From Date:	10-MAR-2008 	To Date:	<input type="text"/> 	<input type="checkbox"/> In
Address Type:	MA  Mailing			<input type="checkbox"/> Sou
Sequence Number:	<input type="text" value="6"/>			<input type="checkbox"/> D
Street Line 1:	<input type="text" value="4817 idlewilde"/>			<input type="checkbox"/> Deli
Street Line 2:	<input type="text"/>			<input type="checkbox"/> Corr
Street Line 3:	<input type="text"/>			<input type="checkbox"/> Carr
City:	<input type="text"/>			
State or Province:	<input type="text"/> 			
ZIP or Postal Code:	<input type="text" value="87108"/> 			




Error: Unknown Street

The system can't find anything with that spelling. The correct spelling of street name is Idlewilde, not Idelwile. It searches street names alphabetically, so errors in the front of the name have more impact than errors at the end.

Current Identification	Alternate Identification	Address	Telephone
From Date:	<input type="text" value="10-MAR-2008"/> 	To Date:	<input type="text"/> 
Address Type:	<input type="text" value="MA"/>  Mailing		
Sequence Number:	<input type="text" value="6"/>		
Street Line 1:	<input type="text" value="4819 idelwile"/>		
Street Line 2:	<input type="text"/>		
Street Line 3:	<input type="text"/>		
City:	<input type="text"/>		
State or Province:	<input type="text"/> 		
ZIP or Postal Code:	<input type="text" value="87108"/> 		

Banner 

 Unknown Street

If you click OK in the pop-up: address is unverified but formatted

Current Identification	Alternate Identification	Address	Telephone	Biographical	E-mail	Emergency
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From Date: 10-MAR-2008 **To Date:**

Inactivate Address

Address Type: MA Mailing

Source:

Sequence Number:

Street Line 1: *Capitalized, but no Ln, St, Ave, etc*

Street Line 2:

Street Line 3:

City: *Populates by zip*

State or Province: NM New Mexico

ZIP or Postal Code: *No +4 on the zip*

County: Bernalillo *Populates*

Nation:

Delivery Point:

Correction Digit:

Carrier Route:



Last Update

What to do if the address does not verify

1. Check the original document - did you mis-type or mis-read the address?
2. If the address was entered accurately, follow your office's procedures regarding unverified addresses. Not sure? Ask your supervisor.
3. Optional: check the address on the Post Office site (<http://zip4.usps.com/zip4>) for additional options (see Appendix C for example).

“Override Address Verification” Checkbox

Current Identification Alternate Identification **Address** Telephone Biographical E-mail Emergency Contact Additional Identification

From Date:  **To Date:** 

Address Type: ▼

Sequence Number:

Street Line 1:

Street Line 2:

Street Line 3:

Foreign Province:

City:

US State: ▼

ZIP or Postal Code: ▼

NM County: ▼

Foreign Nation: ▼

Telephone Type: ▼

Inactivate Address

Source: ▼

Override Address Verification

Delivery Point:

Correction Digit:

Carrier Route:


Last Update

User:

Activity Date:

Area Code **Phone Number** **Extension**

 ▼



When to use the checkbox

- When entering a foreign address.
- **ONLY** check it when the person confirms that they receive mail at that address (even though the address does not verify in Banner)
- **NEVER** check it just because you can find the address on Google – there are addresses on Google/Mapquest/etc. that the Post Office considers undeliverable and the mail may be returned

What is the checkbox for?

- When “Do Not Verify Address” is checked, the address will be skipped in the nightly cleanup and will not appear on error reports
- The checkbox turns real-time verification off as well, so changes to the address won't be verified on the form, either. If you uncheck the box, the address will be verified.

Other new functionality:

Automatic corrections - typos

The new functionality fixes common typos and abbreviations:



- 'Toas' → 'Taos'
- 'Riorancho' or 'Rio Ranchos' → 'Rio Rancho'
- 'Rancho De Taos' or 'Rancho De Toas' → 'Ranchos de Taos'
- 'Kafb' or 'Kirtland Afb' → 'Kirtland AFB'
- 'Alb', 'Abq', 'Albuq', 'Alquerque', 'Albuqurque', 'Albuqerque', 'Albuquerque', 'Albuqeurque', etc. → 'Albuquerque'

Tips and Tricks

- Type less, save time: enter just Line 1 and zip code, and let the system do the work.
- If you don't have a zip code, enter the street line, city, and state. If the address is found, the system will fill in the zip code for you.
- The system searches street names alphabetically, so errors in the front of the street name have more impact than errors at the end. Example: if the street name is Idlewilde, entering Edlewilde will fail, but misspelling the back half of Idleweild will find Idlewilde

Common Questions: How do I know if the address was verified?

Current Identification	Alternate Identification	Address	Telephone	Biographical	E-mail	Emer
------------------------	--------------------------	----------------	-----------	--------------	--------	------

From Date: 10-MAR-2008  **To Date:**  **Inactivate Address**

Address Type: MA Mailing **Source:**

Sequence Number:

Street Line 1: *formatted*

Street Line 2:

Street Line 3:

City:

State or Province: NM New Mexico

ZIP or Postal Code: *+4 added to zip code*

County: Bernalillo

Nation:

Delivery Point: *PO route info populated*

Correction Digit:

Carrier Route:

Last Update

Common Questions: Why won't this address verify when I know it's right??

1. Did you type it in correctly?
2. Does it verify on the Post Office site (<http://zip4.usps.com/zip4>)?
3. Is the “Do Not Verify Address” checkbox checked? If so, all verification on the page is turned off. To turn it back on, uncheck the box.

Common Questions: How do I re-verify an existing address?

- If you change an existing address it will re-verify when you tab out of the field
- If you want to re-verify an existing address without changing it, check the “Do Not Verify Address” box and then uncheck it. This will force verification of the address.

Common Questions: Have all the addresses in Banner been verified?

Yes. All active addresses have been run through the verification software and formatted. Addresses that didn't verify are listed on error reports that the main offices will be working.

How can you tell? If an address record has the Post Office route information on the right of the address page populated, it has been verified.

Common Questions: How is this different from what's on DSS?

1. Same database, different tool: The new address functionality in Banner uses a tool called Runner Clean Address, whereas DSS uses a tool called Melissa. Both tools use the U.S. Postal Service database of deliverable addresses.
2. On DSS, if the address doesn't verify the person cannot continue. In Banner, you can continue data entry and save an unverified address by clicking OK in the error box and saving.

For more information

- Have a question? Send all General Person questions to gp@unm.edu

Appendix A:

US Postal Addressing Standard

Name or attention line: JANE L MILLER
Delivery address: 1960 W CHELSEA AVE STE 2006
City, state, ZIP Code: ALLENTOWN PA 18104-2239

- Automated mail processing machines read addresses on mailpieces from the **bottom up** and will first look for a city, state, and zip code. Then the machines look for a delivery address, then apartment, then name.
- Always put the attention line on top -- never below the city and state.
- If you can't fit the suite or apartment number on the same line as the delivery address, put it on the line **ABOVE** the delivery address, not on the line below.
- No punctuation, ever, anywhere. One space between city and state, two spaces between state and zip code.

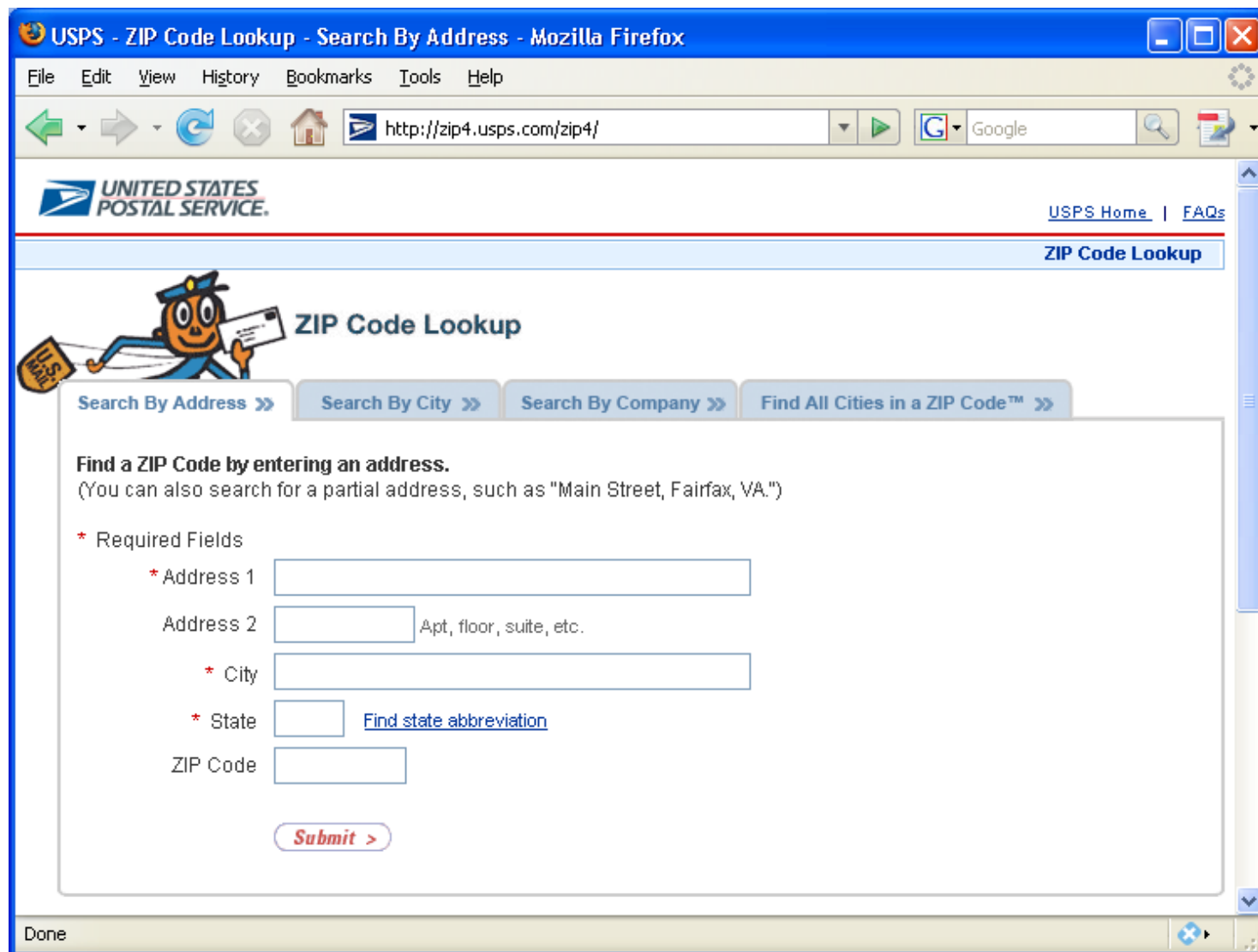
Appendix B: Address Error Codes

CODE	DESCRIPTION	HELP_TEXT
A1	Address Does Not Match to ZIP+4 file	Input Address Not Matched to the ZIP+4 file
C	Canadian ZIP Code	The ZIP Code matches the format characteristics of a Canadian ZIP Code.
CC	Suite/Apt Invalid	Input Address Primary Number Matched to DPV but Secondary Number not Matched (present but invalid)
F	DPV Offline - Artificially created address	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 Melissa Data, 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 Melissa Data and you, its customer 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 Melissa Data.
M	Multiple Matches	More than one record matches the address and there is not enough information available in the input address to break the tie between multiple records. Passing information, such as city names or urbanization names, can help reduce the number of multiple match errors.
M1	Street Number Missing	Input Address Primary Number Missing
M3	Street Number Invalid	Input Address Primary Number Invalid
N	No Street Data for ZIP	The ZIP Code exists but no streets begin with the same letter in that ZIP Code.
N1	Suite/Apt Missing	Input Address Primary Number Matched to DPV but Highrise Address Missing Secondary Number

Appendix B: Address Error Codes

CODE	DESCRIPTION	HELP_TEXT
P1	Missing PO, RR, or HC Box number	Input Address Missing PO, RR, or HC Box number
P3	Postal or Rural Route Primary number invalid	Input Address Postal or Rural Route Primary number invalid
R	Address out of Range	The address was found but the street number in the input address was not between the low and high range of the post office database.
R1	Suite/Apt Missing	Input Address Matched to CMRA but Secondary Number not Present
T	Component Mismatch	Either the directionals or the suffix field did not match the post office database, and there was more than one choice for correcting the address. For example, if the given address was "100 Main St" and the only addresses found were "100 E Main St" and "100 Main Ave", the error code "T" would be returned because we do not know whether to add the directional "E" or to change the suffix to "Ave".
U	Unknown Street	An exact street name match could not be found and phonetically matching the street name resulted in either no matches or matches to more than one street name.
W	Early Warning System - included in next data update	This address has been identified in the Early Warning System (EWS) data file, and should be included in the next national database update.
X	Non-Deliverable Address	The physical location exists but there are no homes on this street. One reason might be railroad tracks or rivers running alongside this street, as they would prevent construction of homes in this location.
Z	ZIP Code Error	The ZIP Code does not exist and could not be determined by the city and state.

Appendix C: Searching the Post Office site - <http://zip4.usps.com/zip4>



The screenshot shows a Mozilla Firefox browser window with the title "USPS - ZIP Code Lookup - Search By Address - Mozilla Firefox". The address bar contains "http://zip4.usps.com/zip4/". The page features the USPS logo and a navigation menu with "ZIP Code Lookup" selected. Below the navigation menu is a cartoon postman character holding a mail envelope. The main content area has four search options: "Search By Address >>", "Search By City >>", "Search By Company >>", and "Find All Cities in a ZIP Code™ >>". The "Search By Address" option is selected. Below this, there is a heading "Find a ZIP Code by entering an address." followed by a sub-heading "(You can also search for a partial address, such as 'Main Street, Fairfax, VA.').". A section titled "* Required Fields" contains five input fields: "Address 1", "Address 2" (with a note "Apt, floor, suite, etc."), "City", "State" (with a link "Find state abbreviation"), and "ZIP Code". A "Submit >" button is located at the bottom of the form.


USPS - ZIP Code Lookup - Search By Address - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://zip4.usps.com/zip4/

UNITED STATES POSTAL SERVICE. [USPS Home](#) | [FAQs](#)

ZIP Code Lookup

 ZIP Code Lookup

[Search By Address >>](#) [Search By City >>](#) [Search By Company >>](#) [Find All Cities in a ZIP Code™ >>](#)

Find a ZIP Code by entering an address.
(You can also search for a partial address, such as "Main Street, Fairfax, VA.")

* Required Fields

* Address 1

Address 2 Apt, floor, suite, etc.

* City

* State [Find state abbreviation](#)

ZIP Code

[Submit >](#)


Done

Multiple results for search on <http://zip4.usps.com/zip4>

Find a ZIP + 4® Code By Address Results

You Gave Us
1109 QUINCEY
ALBUQUERQUE NM

[Lookup Another ZIP Code™](#)

 Your search terms matched more than one address. If you provide additional information (apartment or mail stop, for example) we can give more accurate results.

entries 1-2 of 2

Matching Addresses	ZIP + 4 Code	
(ODD Range 1101 - 1199) QUINCY ST SE ALBUQUERQUE NM	87108-4521	Mailing Industry Information
(ODD Range 1101 - 1199) QUINCY ST NE ALBUQUERQUE NM	87110-5829	Mailing Industry Information

entries 1-2 of 2

Done