# Parser & Standardization White Paper

**ITS-ESE Task Order No.: 015**
**Contract No.: 68-W-04-005**
**March 14, 2006**

**Developed for:**
**United States Environmental Protection Agency**
**Office of Environmental Information**
**1200 Pennsylvania Avenue, NW**
**Washington, DC 20460**

**Developed by:**

LOCKHEED MARTIN

**National Environmental Information**
**Systems Engineering Center (NEISEC)**
**1010 N. Glebe Road**
**Arlington, VA 22201**

**Doc. No.: 015-FRS-RPT-0127**
**Version: 2006-0314**

# TABLE OF CONTENTS

## 1.0 Introduction

The Facility Registry System (FRS) database receives a large number of data files from various sources. The first procedures that execute on the data file are a parser procedure and a standardization procedure, both of which were developed years ago. The purpose of the parser and standardization procedure is to break up the data values into distinct parts and the smallest data units, to derive where there is missing data, see where data is similar once characters are standardized to improve the matching purpose, and to generate data quality and address type (for example: rural, urban, mailing directions). Without all the procedures in place, the data will not allow matching software to link some data values accurately and the data will also be inconsistent because of various naming conventions used. Plus, without any procedures in place to catch possible duplicate facility listings, there will be multiple records within FRS of the same facility. This can create problems, especially when handling highly sensitive data.

Overall, the parser and standardization procedure manipulates incoming data through multiple processes. The parser prepares the data by dividing it into different fields based on their data type. The values are then standardized to create uniformity. Once standardized, the values are then validated using a data quality code procedure to verify there are no inconsistent or null values. After the data quality code is assigned to each data record, it is then integrated into the FRS database.

The standardization procedure is designed to create uniformity among the data. Uniformity is important when handling large amounts of incoming data records that use various naming conventions. The parser is used to break down and link parts of the incoming data to the correct standardization procedure, since the standardization procedure consists of multiple sub procedures that handle the different types of data. The purpose of this document is to explain, in detail, the different procedures used to parse and standardize incoming data.

Figure 1 depicts the overall flow of how incoming data is handled. Data enters from various sources and is temporarily stored in staging tables. It is then separated into site and non-site related data tables. The parser and standardization procedure is executed on site data with the exception of alternate name data. In this case, the alternate name data only executes the standardization procedure.

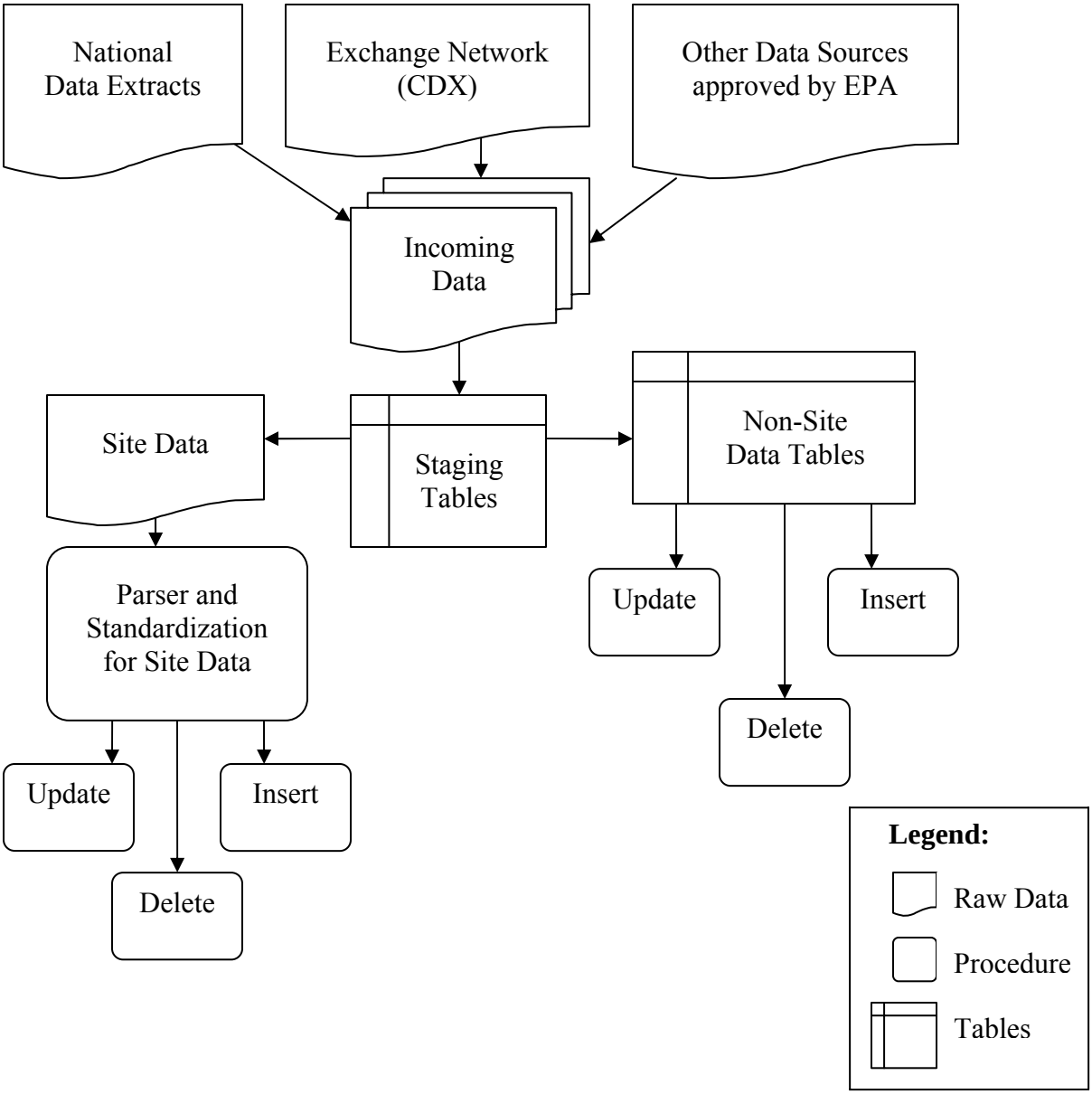



**Figure 1. High Level Data Flow Diagram.**

The current FRS system utilizes many procedures to execute standardization and to format of incoming data into the FRS database. These data files are in a different format and need to be verified and validated using various procedures; in this case the standardization procedures. Then the files are put into temporary database tables for later integration. The parser procedure takes apart the data file and puts the values into their corresponding fields as shown in Figure 2. The parser procedure does not execute on alternate name data even though it is considered to be site data, because the data does not need to be parsed. The standardization procedure executes on alternate name data to standardize the name, which is why it is handled separately in Figure 2.

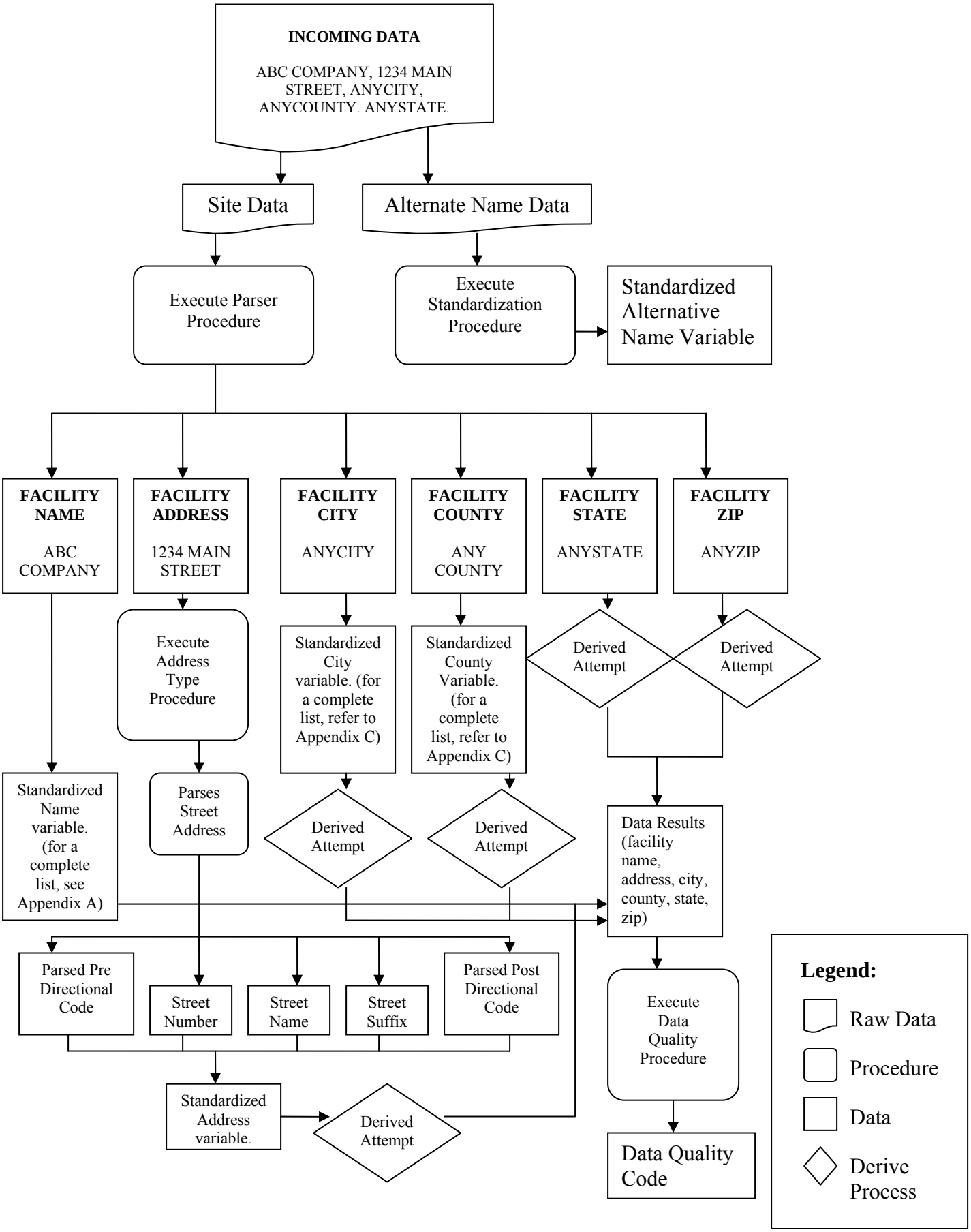


**Figure 2. Parser and Standardization Flow Diagram.**

For example, an incoming file could have the facility name, address, city, county, state, and zip separated by some common parser delimiter like a comma. The parser procedure will then dissect the information and put each value into its respective field tag such as in Figure 2. If any of the data is missing from the incoming data file, the values are then derived using the zip code reference table. For example, if the incoming data is missing a zip code, the parser procedure will reference the zip code table to locate the correct zip code using the city and state information for that specific data record. The zip code reference table is populated using information obtained from United States Postal Service.

Throughout this document, each section in the above diagram will be explained in further detail. The primary name, also known as the facility name, will be standardized and compared to a list of anomalies in Appendix A. An anomaly is an unexpected result. Not everyone inputs everything the same. For example, the incoming state data could have zeros listed as the state code instead of an actual state abbreviation. Another example is when alphanumeric data is listed in the zip code field. In both instances, these are anomalies and are verified using either the state or zip code anomaly list. There are anomaly lists for the other remaining data fields, such as facility name, but only the standard name, city, and county are shown in this document. These lists have been developed over time and contain most of the commonly used words.

The address field has a list of anomalies that are checked as well. For instance, when encountering different versions of the word ROAD and STREET it has become helpful to standardize these different versions down to one common version. The address field is parsed into separate groupings before the anomaly is checked. The address field consists of the pre directional code, the street number, the street name, the suffix, the post directional code, the city, the county, the state, and the zip code. The pre directional code consists of the value that is before the street number in the address field and is usually represented by using N, S, E, and W for example. The post directional code is the value that follows the street number field and is represented by using acronyms such as NW, NE, SE, and SW. The city, county, state, and zip code are handled separately from the rest of the address field.

The data quality code is derived using the address, city, county, state, and zip code. This field is important because it determines the validity of the data. Deriving the data quality code is an automated process that evaluates the quality of each record's data values and based on the evaluation, assigns a data quality code. The facility site name and location address are checked against a table of known anomalies. Next, the standardized city name, county name, state code, and zip code are validated for consistency across data fields using data extracted from the zip code reference table. If the combination of city name, county name, state code, and zip code is invalid, the invalid data elements are identified and a data quality code is assigned to the record.

## 2.0 Primary Name Standardization

The primary name field is standardized by calling the name standardization procedure and assigning it to the standard name field (STD_NAME). The standard name procedure uses the primary name field as the only input parameter. Once completed, the results are placed into another variable called STD_PRIMARY_NAME or the standardized primary name field. The following is a hard-coded list depicting any original text that is replaced by the procedure. The procedure checks the data for any of the following text and, if found, replaces the original text with the new data value. For example, if there was a '@' sign in the primary name, the procedure will remove the symbol. Please refer to Appendix A for a detailed list of primary name anomalies.

Primary Name Special Characters

| Original | New Data Value |
|---|---|
| "-" | " " |
| "_" | " " |

Primary Name Special Characters

| Original | New Data Value |
|---|---|
| "." | " " |
| "@" | " " |
| "/" | " " |

Primary Name Special Characters

| Original | New Data Value |
|---|---|
| "\" | " " |
| "," | " " |
| "(" | " " |
| ")" | " " |
| ";" | " " |
| ":" | " " |
| "%" | " " |
| "*" | " " |
| "#" | Number |

Primary Name Special Characters

| Original | New Data Value |
|---|---|
| "$" | Dollar |
| "+" | " " |
| " | " " |
| " ' ' " | " " |
| "{" | " " |
| "}" | " " |
| "[" | " " |
| "]" | " " |
| "&" | And |

**Table 1. Hard-Coded Primary Name Special Characters.**

The abbreviated name in the FRS standard name table is found for each word of the primary name and it is assigned to the standard name field. The following is a hard-coded list of abbreviations that are reassigned by its respective counterpart during the procedure.

Standard Name Abbreviations

| Original | New Data Value |
|---|---|
| CO OF | COUNTY OF |
| CO OF | ; |
| CORP | ; |
| INC | ; |
| U S | US |
| U.S. | US |
| U. S. | US |
| L L P | ; |
| L L C | ; |
| LTD | ; |
| ; ; | ; |
| THE | " " |
| ALABAMA | AL |
| ALASKA | AK |
| AMERICAN SAMOA | AS |
| ARIZONA | AZ |
| ARKANSAS | AR |
| CALIFORNIA | CA |
| COLORADO | CO |
| CONNECTICUT | CT |
| DISTRICT OF COLUMBIA | DC |
| DELAWARE | DE |
| FLORIDA | FL |
| GEORGIA | GA |
| GUAM | GU |
| HAWAII | HI |
| IDAHO | ID |
| ILLINOIS | IL |

Standard Name Abbreviations

| Original | New Data Value |
|---|---|
| INDIANA | IN |
| IOWA | IA |
| KANSAS | KS |
| KENTUCKY | KY |
| LOUISIANA | LA |
| MAINE | ME |
| MARYLAND | MD |
| MASSACHUSETTES | MA |
| MICHIGAN | MI |
| MINNESOTA | MN |
| MISSISSIPPI | MS |
| MISSOURI | MO |
| MONTANA | MT |
| NEBRASKA | NE |
| NEVADA | NV |
| NEW HAMPSHIRE | NH |
| NEW JERSEY | NJ |
| NEW MEXICO | NM |
| NEW YORK | NY |
| NORTH CAROLINA | NC |
| NORTH DAKOTA | ND |
| OHIO | OH |
| OKLAHOMA | OK |
| OREGON | OR |
| PENNSYLVANIA | PA |
| PUERTO RICO | PR |
| RHODE ISLAND | RI |
| SOUTH CAROLINA | SC |
| SOUTH DAKOTA | SD |

| Standard Name Abbreviations | | Standard Name Abbreviations | |
|---|---|---|---|
| Original | New Data Value | Original | New Data Value |
| TENNESSEE | TN | WEST VIRGINIA | WV |
| TEXAS | TX | WISCONSIN | WI |
| UTAH | UT | WYOMING | WY |
| VERMONT | VT | PLT NUMBER | PLT |
| VIRGIN ISLANDS | VI | BLDG NUMBER | BLDG |
| VIRGINIA | VA | UNIT NUMBER | UNIT |
| WASHINGTON | WA | DIV NUMBER | DIV |

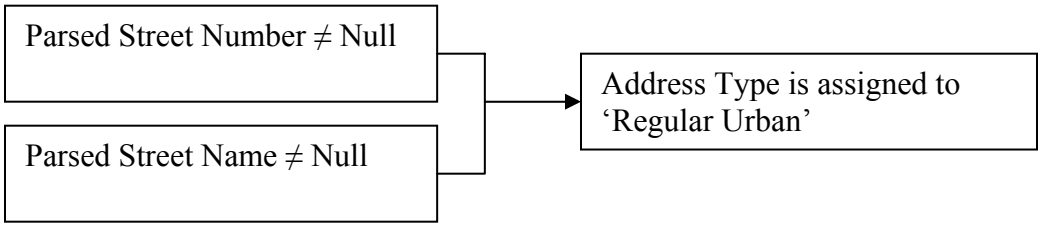
**Table 2. Hard-Coded Standard Name Abbreviations.**

Finally, if the last word in the primary name field is AND, it is removed from the standard name field.

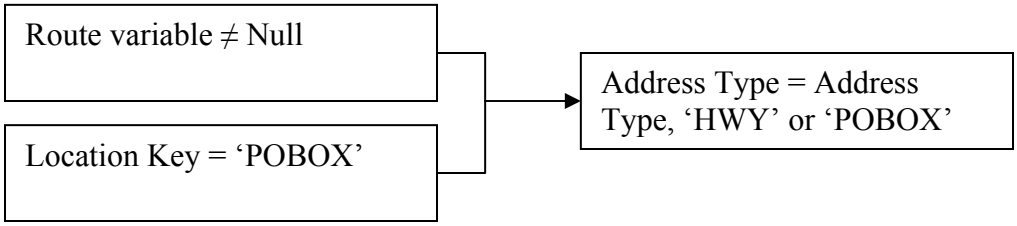
## 3.0 Address Type Procedure

The procedure that handles the address type field first checks the address for the following keywords: TO, FROM, AND, MI (for middle), and BEHIND. If none of the keywords are found in the address field, the data value then gets parsed using the street address parser procedure, which uses the standardized location address and the location key as parameters. The parse address procedure uses the parameters and populates the following fields: parsed pre directional code, parsed street number, parsed street name, parsed street suffix, and parsed post directional code. After the fields are derived, the procedure then checks whether the parsed street number and the parsed street name are accurate. If so, they are then assigned appropriate values.

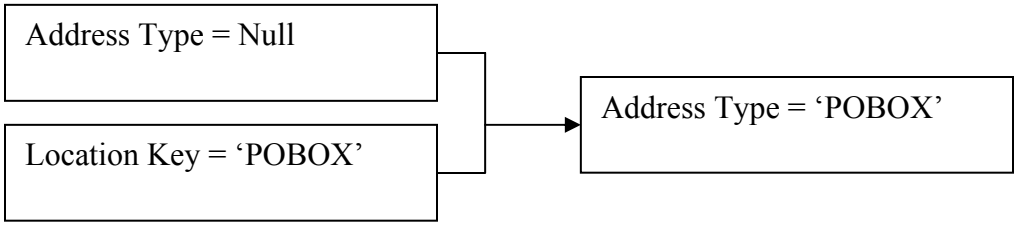
For example, an address listed as route 1, box 60. If the parsed street number variable is null and the variable for BOX is not null, then the ROUTE variable is assigned to the parsed street name variable. For an address listed as 1800 route 1, the procedure checks to see whether there are null values in the parsed street name, the parsed street number, and the ROUTE variables. If the parsed street name variable is null and both the parsed street number and ROUTE variables are not null, then the ROUTE variable is assigned to the parsed street name variable. The address type field is then assigned based on the values in the parsed street number, parsed street name, location key, and the ROUTE variables. Please refer to the diagram below to see the specific cases that can occur.



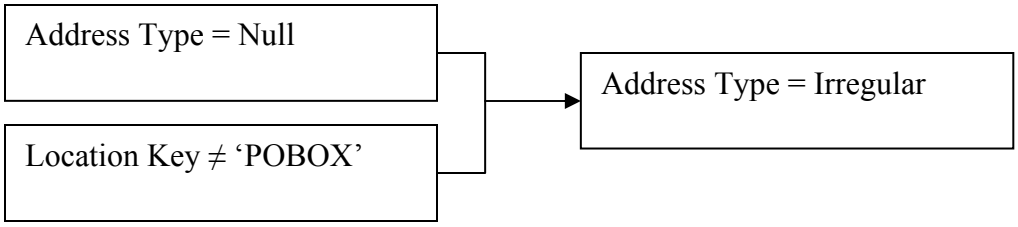

If the parsed street number and the parsed street name are not null, then the address type is assigned to Regular Urban. This means that the address is valid.



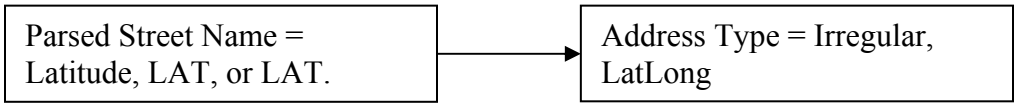

If the route variable is not null and the location key is equal to POBOX or HWY, then the address type will be Regular or Irregular and have HWY or POBOX appended to it.



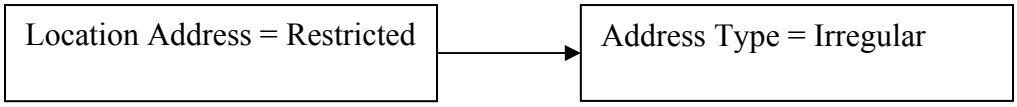

If the address type is null and the location key is equal to POBOX or HWY, then the address type is equal to the value of the location key.



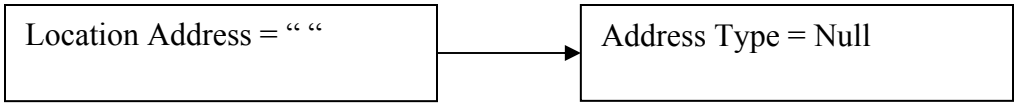

If the address type is null and the location key does not equal POBOX or HWY, then the address type is irregular.




If the parsed street name has latitude, LAT, or LAT in the data value, then the address type is equal to irregular lat/long.




If the location address contains the word restricted, then the address type is irregular.




If the location key is null or empty, then it is assigned to Null

If the parsed street name includes any of the following keywords or symbols it is reassigned a new data value:

- ‘-‘ is replaced by a space
- South is replaced by S
- North is replaced by N

### 3.1 Address Standardization

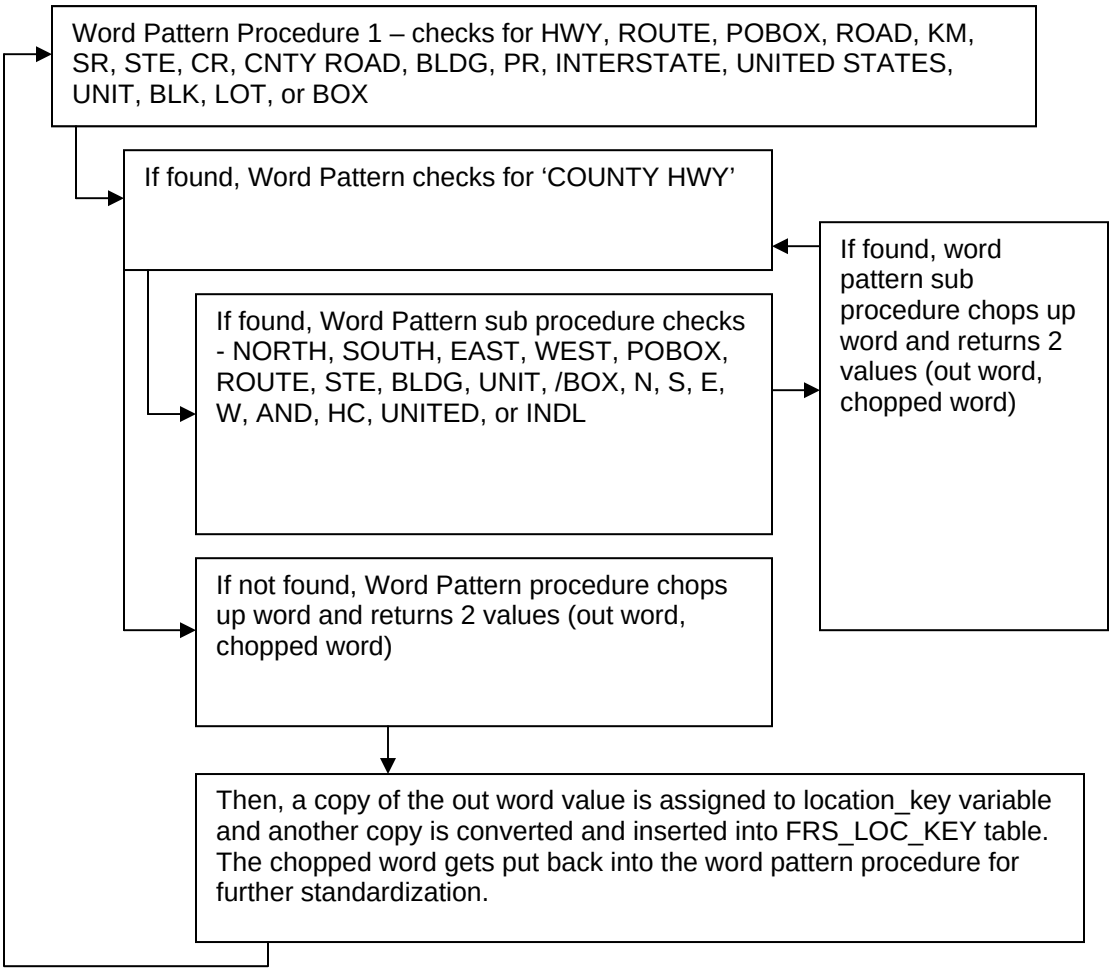
The next procedure, address standardization, standardizes the address location. The data values from the address location field are put into another field named standardized location address. This variable holds the data value after the procedure standardizes the data. The standardized location address field is checked for any of the following keywords:

- HWY
- ROUTE
- POBOX
- ROAD
- KM
- SR
- STE
- CR
- CNTY ROAD
- BLDG
- PR
- INTERSTATE
- UNITED STATES
- UNIT
- BLK
- LOT
- BOX

If the field contains any of these keywords, a word pattern procedure is used to check the word pattern in the field. For example, a value of 2095 COUNTY HWY PARK HWY EAST is entered into the address location field. The value is copied and put into the standardized location address for modification. Then the procedure checks for any of the keywords listed previously. In this case, the keyword HWY is found. Then the procedure runs another check to see whether COUNTY HWY is entered. Finally, the procedure checks for any of the following words that come after the keyword HWY:

- NORTH
- SOUTH
- EAST
- WEST
- POBOX
- ROUTE
- STE
- BLDG
- UNIT
- /BOX
- N
- S
- E
- W
- AND
- HC
- UNITED
- INDL

If any of these keywords are found, the value repeats the word pattern procedure. Once the word pattern procedure is finished, FRS continues with the first procedure. After the procedures are finished executing, two values are returned. One value stored in the FRS location key table is called the ‘out word.’ The other value, ‘chopped word’, is then executed again through the word pattern loop to get truncated even more. For a visual interpretation of how the procedures work, please refer to the diagram below.




Furthermore, if the next word in the word pattern is not any of the following terms (NORTH, SOUTH, EAST, WEST, POBOX, ROUTE, STE, BLDG, UNIT, /BOX, N, S, E, W, AND, HC, UNITED, or INDL), or if it is any of the following words (ROAD, KM, PR, HWY) followed by a number, the out word will equal the word pattern, plus the next word. Otherwise, the chopped word will be the previous part, plus the next part of the out word (if the next part is null then it will be only the previous part). If none of the above conditions are true, then the out word is null and the chopped word will be the previous part, plus the next part of the word pattern. If the word pattern doesn't match with the string, then the chopped word is the same as the string. However, if the word pattern and the string match, then the chopped word is null. The loop keeps executing until the chopped word and the out word are null. Every time the out word is placed into the location key variable, it is inserted into the FRS location key table. This procedure is true for all other keywords. There is an exception to these cases that include any of the following keywords: ROUTE, SR, CR, COUNTY ROAD, ROAD, PR, or UNITED STATES. In these cases, the out word is also assigned to a local variable called V_RTE, or the route variable. Another exception is when any of the following keywords are found:

- POBOX
- KM
- STE
- BLDG
- UNIT
- BLK
- LOT
- BOX
- INTERSTATE

In these cases, the word is also assigned to a variable. For example, if the out word is equal to BOX, the local variable used to store the data will be called V_BOX. The variables are determined by the result of

the out word. Whatever the out word is equal to, the variable will be created as V_[out word]. This is true for POBOX, KM, STE, BLDG, UNIT, BLK, LOT, and INTERSTATE.

The address standardization procedure looks for any of the following words and symbols listed under the 'original' heading and, if found, is replaced by the word listed under the new data value heading. Please refer to the diagram below that shows the hard-coded data values that are in the current address location script. Refer to Appendix B for a list of address location anomalies.

Location Address Data Values

| Original | New Data Value | |
|---|---|---|
| # | " " | |
| RR | RR | (if the pattern is 'RRnumber') |
| RTE | RTE | (if the pattern is 'RTEnumber') |
| RT | RT | (if the pattern is 'RTnumber') |
| ROUTE | ROUTE | (if the pattern is 'ROUTEnumber') |
| RTS | RTS | (if the pattern is 'RTSnumber') |
| P.R. | PR | |
| K.M. | KM | |
| PR- | PR | |
| R.D. | ROAD | |
| junk dot | " " | |
| I- | INTERSTATE | |
| I\number | INTERSTATE Inumber | |
| I \number | INTERSTATE I number | |
| N/A | NOT APPLICABLE | |
| _ | " " | |
| @ | " " | |
| \ | " " | |
| , | " " | |
| & | AND | |
| ( | " " | |
| ) | " " | |
| ; | " " | |
| : | " " | |
| % | " " | |
| * | " " | |
| NO | " " | |
| No. | " " | |
| $ | " " | |
| + | " " | |
| " | " " | |
| " ' ' " | " " | |
| { | " " | |
| } | " " | |
| [ | " " | |
| ] | " " | |
| ` | " " | |
| ~ | " " | |
| ^ | " " | |

Location Address Data Values

| Original | New Data Value |
|---|---|
| RD. | ROAD |
| R. D. | ROAD |
| R R | ROUTE |
| RR | ROUTE |
| S E | SE |
| S W | SW |
| N W | NW |
| N E | NE |
| E W | EW |
| NORTH WEST | NW |
| EAST WEST | EW |
| NORTH EAST | NE |
| SOUTH WEST | SW |
| SOUTH EAST | SE |
| P O BOX | POBOX |
| PO BOX | POBOX |
| POST OFFICE BOX | POBOX |
| _ _ | " _" |
| OUTER | " " |
| EXTENDED | " " |
| BUSINESS | " " |
| OF | FROM |
| TO | FROM |
| OFF | FROM |
| TWENTY FIRST | 21ST |
| TWENTY SECOND | 22ND |
| TWENTY THIRD | 23RD |
| **SAME UNTIL 99TH** | |

**Table 3. Hard-Coded Location Address Part A.**

Some other values that are checked for in the address standardization procedure are as follows:

| Original | New Data Value |
|---|---|
| " " | " " |
| RURAL ROUTE | ROUTE |
| OLD ROUTE | ROUTE |
| R ROUTE | ROUTE |
| STATE ROUTE | ROUTE |
| ST ROUTE | ROUTE |
| ROUTE NO | ROUTE |
| SR | ROUTE |
| S R | ROUTE |
| COUNTY | CNTY |
| CNTY ROUTE | ROUTE |

| | |
|---|---|
| CNTY | COUNTY |
| STATE | " " (if the pattern is 'STATE ROADnumber' or 'STATE ROAD number') |
| ST ROAD | ROAD |
| R D | ROAD |
| ACCESS ROAD | ROAD |
| PR ROAD | ROAD |
| HCR | ROAD |
| U.S. | UNITED STATES |
| US. | UNITED STATES |
| US. | UNITED STATES |
| U S | UNITED STATES |
| UNITED STATE | UNITED STATES |
| UNITED STATES HWY | HWY |
| UNITED STATES ROUTE | ROUTE |
| STATE HWY | HWY |
| ST. HWY | HWY |
| NATIONAL HWY | HWY |
| NATL. HWY | HWY |
| NATL HWY | HWY |
| NATNL. HWY | HWY |
| NATNL HWY | HWY |
| OLD HWY | HWY |
| NEW HWY | HWY |
| HWY | HWY |

**Table 4. Hard-Coded Location Address Part B.**

## 4.0 City and County Standardization

The city name and county name fields are standardized by calling the city and county standardization procedure one by one, using the fields as parameter values. Once the procedure finishes, FRS then stores the values in the standard city name and standard county name fields STD_CITY_NAME and STD_COUNTY_NAME, respectively. If the procedure finds any of the following special characters or keywords within the city and county name fields, it will be replaced by the value under the ‘new data value’ heading. Refer to Appendix C for a list of city and county name anomalies.

Special Characters and Data Values for City and County Name

| Original | New Data Values |
|---|---|
| /C/ | " " |
| /T/ | " " |
| /V/ | " " |
| /O/ | " " |
| - | " " |
| _ | " " |
| . | " " |
| @ | " " |
| / | " " |
| \ | " " |

Special Characters and Data Values for City and County Name

| Original | New Data Values |
|---|---|
| & | " " |
| ( | " , " |
| ) | " , " |
| ; | " " |
| : | " " |
| % | " " |
| * | " " |
| # | " " |
| $ | " " |
| + | " " |

| Special Characters and Data Values for City and County Name | | Special Characters and Data Values for City and County Name | |
|---|---|---|---|
| Original | New Data Values | Original | New Data Values |
| " ' ' " | " " | ^ | " " |
| " | " " | " " | " " |
| { | " " | CITY OF | NULL |
| } | " " | BOROUGH OF | NULL |
| [ | " " | BORO OF | NULL |
| ] | " " | TOWNSHIP OF | NULL |
| ` | " " | TWNSP OF | NULL |
| ~ | " " | TWP OF | NULL |

**Table 5. Hard-Coded City and County Name.**

Next, any commas and entries after the comma are removed as well. The next step in the procedure is to retrieve the word and construct a new primary name; specifically, the program retrieves each word in the field, separates them using quotes, and standardizes them. For example, if the word is ‘LA’, then ‘LA’ is appended to the standard city name field or standard county name field. Another example is if the word is ‘CO’, then ‘Colorado’ is appended to the standard city name or standard county name field. Additionally, the standard name from the FRS standard city and county table can be appended to the standard city name or standard county name field for that particular name.

After standardization, the following items, if found, are replaced with corresponding values listed under the ‘new data value’ heading. Please refer to the list below for a complete hard-coded list of these values and their new data values.

| After Standardization Data Values for City and County Names | | After Standardization Data Values for City and County Names | |
|---|---|---|---|
| Original | New Data Value | Original | New Data Value |
| TOWN OF | NULL | NORTH EAST OF | NULL |
| TWN OF | NULL | SOUTH EAST OF | NULL |
| VILLAGE OF | NULL | NORTH OF | NULL |
| SOUTH WEST OF TOWN | NULL | SOUTH OF | NULL |
| NORTH WEST OF TOWN | NULL | EAST OF | NULL |
| NORTH EAST OF TOWN | NULL | WEST OF | NULL |
| SOUTH EAST OF TOWN | NULL | VICINITY OF | NULL |
| EAST OF TOWN | NULL | IS NEARBY | NULL |
| WEST OF TOWN | NULL | BURGH | BURG |
| NORTH OF TOWN | NULL | A F B | NULL |
| SOUTH OF TOWN | NULL | AIR FORCE BASE | NULL |
| SOUTH WEST OF | NULL | " " | " " |
| NORTH WEST OF | NULL | " " | " " |

**Table 6. Hard-Coded Standardized City and County Names.**

Finally, if the final word after standardization is null, then the original value is going to be assigned to standard city name or standard county name.

## 5.0 State and Zip Standardization

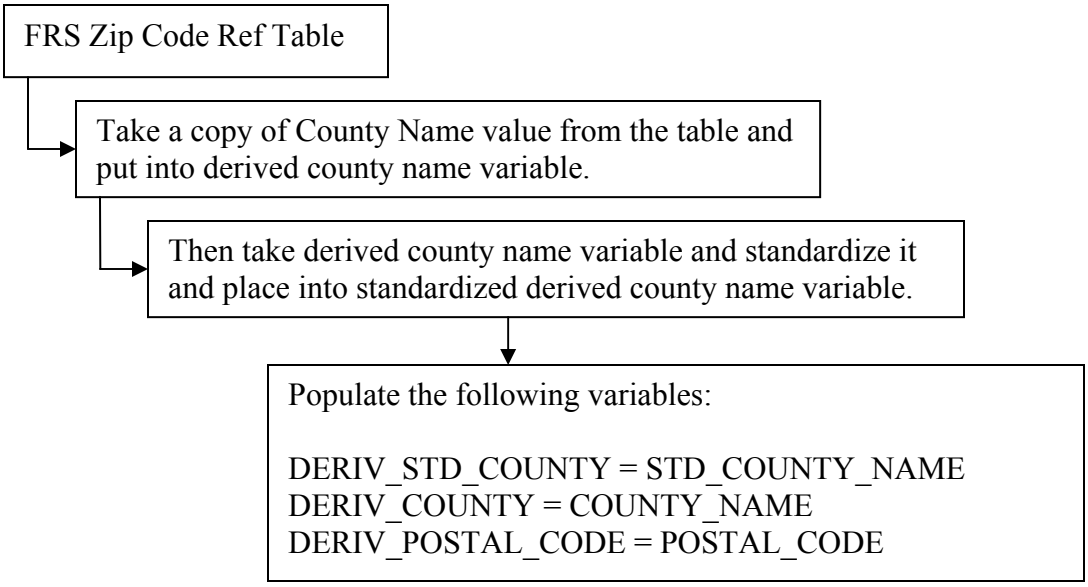
States and zip codes are both derived using the zip code reference table. The procedure takes the data values in the other columns, such as address, city, and county, and uses the zip code reference table to match up the missing states and zip code data. Once the information is found, the state and zip code for the record is stored in the FRS RES program facility table. Otherwise, if there is no match, then the data fields stay empty.

## 6.0 Data Quality Standardization

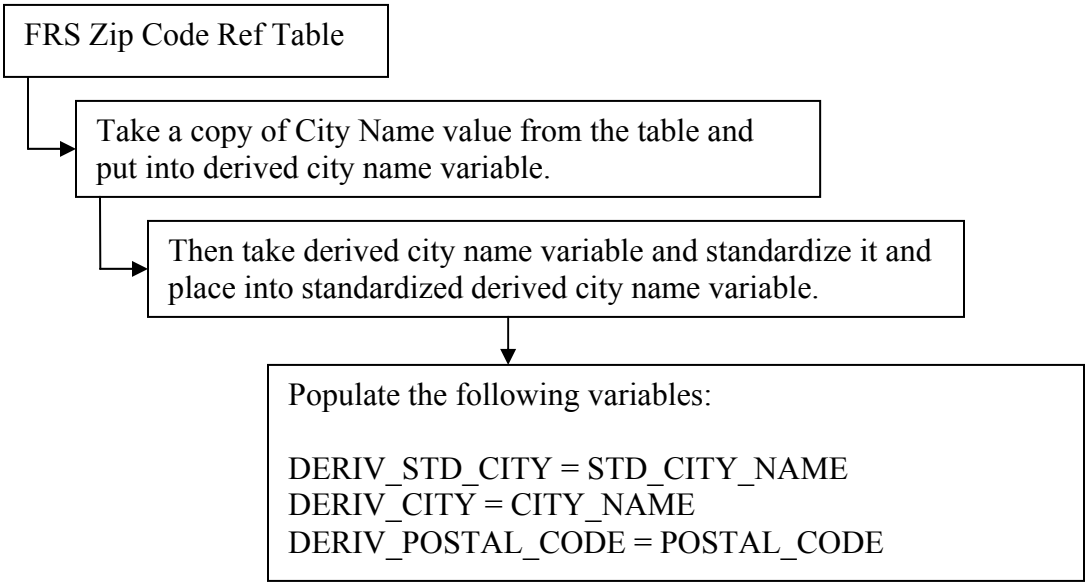
Data quality uses the city, county, state, and zip code fields to standardize and determine the quality of the data. If any of the data values in those four fields are missing or invalid, that data value is marked in the data quality code field. The lowercase letters identify what problem has been identified, and the uppercase letters identify which data element has been identified with having a problem. Please refer to the chart below for a list of the data quality codes that are used in the FRS database.

| Code | Description |
|---|---|
| i | Invalid: used for ZIP codes, County names and City names that do not correspond with one another. |
| e | Erroneous: Used for facility names and addresses that contains anomalies. |
| m | Missing: Used for any core data element containing no information (Facility Name, Address, City, County, State or ZIP Code). |
| A | Address |
| N | Facility Name |
| C | City Name |
| O | County Name |
| Z | ZIP Code |
| M | Combination of city and county |
| V | Valid |

The data quality code field is determined by calling the FRS data quality code procedure. There are three different cases that determine the outcome of this procedure. The first case is concerned with missing or invalid county name. The county name is derived from the FRS zip code reference table from the county name column for a particular record. The county name is then standardized using the city and county name procedure and is stored into a variable called the derived standard county variable. Also, the derived postal code variable is populated with the value in the postal code field. Please refer to the following for a graphical representation of the first case.




The second case involves missing or invalid city name. The city name value is derived from the FRS zip code reference table as in the first case and then is put into the derived city name variable for standardization. The city and county name standardization procedure then occurs and creates a standardized city name variable and populates it with the result. Also the derived standard county variable populates the standard county name field. The derived county name variable populates the county name field. The derived postal code variable populates the postal code field. Please refer to the following for a graphical representation of the second case.



The third case involves missing or invalid zip codes. The postal code is derived from the FRS zip code reference table and populates the following fields:

- DERIV_STD_COUNTY = STD_COUNTY_NAME
- DERIV_STD_CITY = STD_CITY_NAME
- DERIV_COUNTY = COUNTY_NAME
- DERIV_CITY = CITY_NAME

All above populated values are updated in the FRS RES program facility table.

## 7.0 Alternative Name Standardization

The alternative name standardization procedure takes in one parameter, and is used to standardize the alternative name field. The result is then assigned to another variable, called STD_ALT_NAME, or standardized alternative name.

## 8.0 Summary

As previously seen throughout this document, the parser and standardization procedure contains multiple processes for the data to go through. First the data is divided using the parser procedure into different fields corresponding to the type of data it is. Then these values are standardized by their respective procedures to allow for consistency, such as the standardized name procedure that will standardize the primary name field. These values are then validated using the data quality code procedure to make sure the data is not null or contain any inconsistencies. Once this code is assigned to each record, the data is integrated into the FRS database.

The parser and standardization procedures are important because it ensures the accuracy of the data. If any data is found to be inaccurate, the procedures will flag the data records for manual review and an analyst will review the record for inconsistencies and correct any data that is incorrect. These procedures also improve the matching purpose by making sure that the data is accurate and uniform. Without the accuracy and uniformity, there will be multiple records within FRS that could be the same facility; however, the difference in data between the records may not suggest that they are the same and therefore, the records will be left unlinked. The automation of these procedures saves time and money compared to when the parser and standardization is not used.

## 9.0 APPENDIX A: Standardized Name Data Values

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| DEPARTM | DEPT | DEPT |
| DEPARTMNT | DEPT | DEPT |
| DEPART | DEPT | DEPT |
| DEVELOPMENT | DEV | DEV |
| DEVELP | DEV | DEV |
| DEVLMNT | DEV | DEV |
| DEVELPMT | DEV | DEV |
| DVLPMT | DEV | DEV |
| DVLPMNT | DEV | DEV |
| DVLOPMT | DEV | DEV |
| DEVMT | DEV | DEV |
| DEVLPMNT | DEV | DEV |
| CORPORATIN | CORP | |
| DEVELOPMT | DEV | DEV |
| DEVELOP | DEV | DEV |
| DEVELOPM | DEV | DEV |
| DEVELOPMNT | DEV | DEV |
| DEVELOPMEN | DEV | DEV |
| DEVEL | DEV | DEV |
| DEVELOPMENTAL | DEV | DEV |
| DISTILLERY | DISTLR | DISTLR |
| DISTILLER | DISTLR | DISTLR |
| DISTILLING | DISTLR | DISTLR |
| DIVISION | DIV | |
| DIVISIONS | DIV | |
| DIVSN | DIV | |
| DIVISIONAL | DIV | |
| ECONOMIC | ECON | ECON |
| ECONOMY | ECON | ECON |
| ECONOMIST | ECON | ECON |
| ECOM | ECON | ECON |
| ELECTRONIC | ELEC | ELEC |
| ELECTRONICS | ELEC | ELEC |
| ELECTRICS | ELEC | ELEC |
| ELECTRIC | ELEC | ELEC |
| ELECT | ELEC | ELEC |
| ELECTRICIAN | ELEC | ELEC |
| ELECTRICITY | ELEC | ELEC |
| ELECTRICAL | ELEC | ELEC |
| ENERGY | ENGRY | ENGRY |
| ENGY | ENGRY | ENGRY |
| ENRG | ENGRY | ENGRY |
| ENTERPRISES | ENTRPRS | ENTRPRS |
| ENTS | ENTRPRS | ENTRPRS |
| ENTERPRISE | ENTRPRS | ENTRPRS |
| ENTERP | ENTRPRS | ENTRPRS |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| ENTRPR | ENTRPRS | ENTRPRS |
| ENTPR | ENTRPRS | ENTRPRS |
| ENVIRONMENT | ENVIR | ENVIR |
| ENVRMT | ENVIR | ENVIR |
| ENVRONMEN | ENVIR | ENVIR |
| ENVIRON | ENVIR | ENVIR |
| ENVIRONMENTAL | ENVIR | ENVIR |
| ENVRNMTL | ENVIR | ENVIR |
| ENVRMTL | ENVIR | ENVIR |
| ESTATES | ESTATE | ESTATE |
| FACILITIES | FACLTY | FACLTY |
| FAC | FACLTY | FACLTY |
| FACILITY | FACLTY | FACLTY |
| FABRIC | FAB | FAB |
| FABR | FAB | FAB |
| FIBERGLASS | FBRGLS | FBRGLS |
| FEDERAL | FED | FED |
| FEDL | FED | FED |
| FDRL | FED | FED |
| FOUNDRY | FNDRY | FNDRY |
| FDRY | FNDRY | FNDRY |
| FNDY | FNDRY | FNDRY |
| FREIGHT | FRGHT | FRGHT |
| FRGT | FRGHT | FRGHT |
| FRT | FRGHT | FRGHT |
| CORPORATIO | CORP | |
| CORPORATE | CORP | |
| FISHERY | FSHRY | FSHRY |
| FORT | FT | FT |
| GASOLINE | GAS | GAS |
| GENERAL | GNRL | GNRL |
| GENL | GNRL | GNRL |
| GEOLOGICAL | GEO | GEO |
| GEOLOGY | GEO | GEO |
| GEOPHYSICAL | GEO | GEO |
| GENERATION | GNRTNG | GNRTNG |
| GENERATING | GNRTNG | GNRTNG |
| GEN | GNRTNG | GNRTNG |
| GENERATOR | GNRTNG | GNRTNG |
| GYMNASTIC | GYM | GYM |
| GYMNASIUM | GYM | GYM |
| HEADQUARTERS | HQ | HQ |
| HDQS | HQ | HQ |
| HQTS | HQ | HQ |
| HQS | HQ | HQ |
| HDQTRS | HQ | HQ |
| HARDWARE | HDWR | HDWR |
| HOSPITAL | HOSP | HOSP |
| HOSPIT | HOSP | HOSP |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| HSPTL | HOSP | HOSP |
| IMPORT | IMPRT | IMPRT |
| IMPORTERS | IMPRT | IMPRT |
| IMPORTING | IMPRT | IMPRT |
| IMPORTS | IMPRT | IMPRT |
| INCORPORATED | INC | |
| INCOR | INC | |
| INCORP | INC | |
| INDUSTRIAL | IND | IND |
| INDL | IND | IND |
| INDUS | IND | IND |
| INDUSTRL | IND | IND |
| INDUSTRIA | IND | IND |
| INDSTRL | IND | IND |
| INDUSTRY | IND | IND |
| INDTRY | IND | IND |
| INDUSTR | IND | IND |
| INDUSTRIES | IND | IND |
| INDS | IND | IND |
| INFIRM | INFRM | INFRM |
| INFIRMARY | INFRM | INFRM |
| INSTITUTE | INST | INST |
| INSTITUT | INST | INST |
| INSTITUE | INST | INST |
| INSTIT | INST | INST |
| INSTITUTION | INST | INST |
| INSTITUTIONAL | INST | INST |
| INTERNATIONAL | INTL | INTL |
| INTRNTNL | INTL | INTL |
| INTNL | INTL | INTL |
| INTERNATIO | INTL | INTL |
| INTERNATION | INTL | INTL |
| INTERNATIONA | INTL | INTL |
| INTERNATL | INTL | INTL |
| INTERNATI | INTL | INTL |
| INVESTMENT | INVSTMNT | INVSTMNT |
| CORPORT | CORP | |
| INVST | INVSTMNT | INVSTMNT |
| INVESTMNT | INVSTMNT | INVSTMNT |
| INVEST | INVSTMNT | INVSTMNT |
| INVESTMT | INVSTMNT | INVSTMNT |
| JUNCTION | JCT | JCT |
| JUNCTON | JCT | JCT |
| JUNCTN | JCT | JCT |
| JCTION | JCT | JCT |
| JCTN | JCT | JCT |
| LABORATORY | LAB | LAB |
| LABORATORIES | LAB | LAB |
| LABS | LAB | LAB |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| LANDFILL | LNDFLL | LNDFLL |
| LNDFL | LNDFLL | LNDFLL |
| LDFL | LNDFLL | LNDFLL |
| LNFL | LNDFLL | LNDFLL |
| LAUNDROMAT | LNDRY | LNDRY |
| LAUNDRY | LNDRY | LNDRY |
| LANDSCAPE | LNDSCP | LNDSCP |
| LIMITED | LTD | LTD |
| LMTD | LTD | LTD |
| LUBRICATION | LUBE | LUBE |
| LUBRICANT | LUBE | LUBE |
| LUBRICNT | LUBE | LUBE |
| LUBRICANTS | LUBE | LUBE |
| LIVESTOCK | LVSTCK | LVSTCK |
| LVSTK | LVSTCK | LVSTCK |
| MACHINE | MACH | MACH |
| MCH | MACH | MACH |
| MCHINE | MACH | MACH |
| MACHINING | MACH | MACH |
| MACHINER | MACH | MACH |
| MACHINIST | MACH | MACH |
| MACHINERY | MACH | MACH |
| MCHY | MACH | MACH |
| MATERIALS | MATL | MATL |
| MATERIAL | MATL | MATL |
| MATLS | MATL | MATL |
| MANF | MFG | MFG |
| MANUF | MFG | MFG |
| MANUFACTURE | MFG | MFG |
| MANUFACTURER | MFG | MFG |
| MANUFACTURI | MFG | MFG |
| MANUFACTURING | MFG | MFG |
| MFGNG | MFG | MFG |
| MFGR | MFG | MFG |
| MFR | MFG | MFG |
| MANAGEMENT | MGMT | MGMT |
| MNGMNT | MGMT | MGMT |
| MNGN | MGMT | MGMT |
| MNGMT | MGMT | MGMT |
| MGMENT | MGMT | MGMT |
| MANGMNT | MGMT | MGMT |
| MANAGER | MGMT | MGMT |
| MANAGE | MGMT | MGMT |
| MNAGER | MGMT | MGMT |
| MNGR | MGMT | MGMT |
| MINNG | MINE | MINE |
| MINES | MINE | MINE |
| MINING | MINE | MINE |
| MARKET | MKT | MKT |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| MRKT | MKT | MKT |
| MARKETING | MKTG | MKTG |
| MRKTG | MKTG | MKTG |
| MKTNG | MKTG | MKTG |
| MKTING | MKTG | MKTG |
| MAINTENANCE | MNTNC | MNTNC |
| MAINT | MNTNC | MNTNC |
| MTNCE | MNTNC | MNTNC |
| MOUNTAIN | MTN | MTN |
| MNTN | MTN | MTN |
| NAT | NATL | NATL |
| NATIONAL | NATL | NATL |
| OPERATOR | OPR | OPR |
| OPRTR | OPR | OPR |
| OPER | OPR | OPR |
| OPERATIONS | OPR | OPR |
| OPERATION | OPR | OPR |
| OPERATING | OPR | OPR |
| OPERATIONAL | OPR | OPR |
| PETROLEUM | PETRO | PETRO |
| PHARMACY | PHARM | PHARM |
| PHARMACEUTICAL | PHARM | PHARM |
| PHARMACIST | PHARM | PHARM |
| TELEPHONE | TELE | TELE |
| COATING | COTG | COTG |
| COATINGS | COTG | COTG |
| COATER | COTG | COTG |
| COATERS | COTG | COTG |
| CAPITAL | CPTL | CPTL |
| CAPITOL | CPTL | CPTL |
| CPTAL | CPTL | CPTL |
| CPTOL | CPTL | CPTL |
| CORRECTION | CRRCTN | CRRCTN |
| CORRECTIONAL | CRRCTN | CRRCTN |
| COURT | CT | CT |
| CRT | CT | CT |
| CEN | CTR | CTR |
| CENT | CTR | CTR |
| CENTER | CTR | CTR |
| CENTERS | CTR | CTR |
| CENTR | CTR | CTR |
| CENTRE | CTR | CTR |
| CNTR | CTR | CTR |
| DEPARTMENT | DEPT | DEPT |
| FOTO | PHOTO | PHOTO |
| PHOTOGRAPH | PHOTO | PHOTO |
| PHOTOGRAPHER | PHOTO | PHOTO |
| PHOTOGRAPHY | PHOTO | PHOTO |
| PACKAGE | PKG | PKG |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| PACKG | PKG | PKG |
| PACKAGING | PKG | PKG |
| PASTICS | PLAS | PLAS |
| PLASTIC | PLAS | PLAS |
| PLANT | PLT | PLT |
| PLANTS | PLT | PLT |
| PLNT | PLT | PLT |
| PRODS | PROD | PROD |
| PRODUCE | PROD | PROD |
| PRODUCT | PROD | PROD |
| PRODUCTS | PROD | PROD |
| PRODUCING | PROD | PROD |
| PSYCHOLOGIST | PSYCH | PSYCH |
| PSYCHIATRIST | PSYCH | PSYCH |
| PSYCHIATRIC | PSYCH | PSYCH |
| PSYCHOLOGICAL | PSYCH | PSYCH |
| PSYCHIATRY | PSYCH | PSYCH |
| PSYCHOLOGY | PSYCH | PSYCH |
| PUBLICATIONS | PUB | PUB |
| PUBLISHERS | PUB | PUB |
| PUBLISHING | PUB | PUB |
| PUBLISHER | PUB | PUB |
| PUBLICATION | PUB | PUB |
| POWER | PWR | PWR |
| REGIONAL | REGN | REGN |
| REGION | REGN | REGN |
| REFINING | RFNRY | RFNRY |
| REFINERY | RFNRY | RFNRY |
| REFY | RFNRY | RFNRY |
| REF | RFNRY | RFNRY |
| RAILROAD | RR | RR |
| RAIL | RR | RR |
| RAILWAY | RR | RR |
| SCHO | SCH | SCH |
| SCHOOLS | SCH | SCH |
| SCHOOL | SCH | SCH |
| SPECIALIST | SPCLTY | SPCLTY |
| SPECIALTY | SPCLTY | SPCLTY |
| SPEC | SPCLTY | SPCLTY |
| SPECIALTIES | SPCLTY | SPCLTY |
| STATN | STA | STA |
| STATION | STA | STA |
| STAT | STA | STA |
| STN | STA | STA |
| SERVIC | SVC | SVC |
| SVCS | SVC | SVC |
| SERV | SVC | SVC |
| SERVICES | SVC | SVC |
| SRVCS | SVC | SVC |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| SERVICE | SVC | SVC |
| SER | SVC | SVC |
| SYSTEM | SYS | SYS |
| SYSTEMS | SYS | SYS |
| TECHNOLOGIST | TECH | TECH |
| TECHS | TECH | TECH |
| TECHNOLOGY | TECH | TECH |
| TECHNOLOGIES | TECH | TECH |
| TECHNOLOGICAL | TECH | TECH |
| TECHNICAL | TECH | TECH |
| TECHNICIAN | TECH | TECH |
| TELECOMMUNICATION | TELE | TELE |
| TELCOMMN | TELE | TELE |
| TERMINAL | TERML | TERML |
| TERMINALS | TERML | TERML |
| TERM | TERML | TERML |
| TERMIAL | TERML | TERML |
| ADMINISTRATN | ADMN | ADMN |
| ADMINIST | ADMN | ADMN |
| ADMINISTRATION | ADMN | ADMN |
| ADMINISTRATI | ADMN | ADMN |
| ADMINISTRA | ADMN | ADMN |
| ADMINISTR | ADMN | ADMN |
| ADMINISTER | ADMN | ADMN |
| ADMINISTRATOR | ADMN | ADMN |
| ADMINSTR | ADMN | ADMN |
| ADMNSTRN | ADMN | ADMN |
| ADMR | ADMN | ADMN |
| ADMSTR | ADMN | ADMN |
| ADMINI | ADMN | ADMN |
| ADMINISTRATV | ADMN | ADMN |
| ADMINISTRATIVE | ADMN | ADMN |
| ADVERTISE | ADVT | ADVT |
| ADVERTISER | ADVT | ADVT |
| ADVERTISERS | ADVT | ADVT |
| ADVERT | ADVT | ADVT |
| ADVTNG | ADVT | ADVT |
| ADVERTISING | ADVT | ADVT |
| ADVG | ADVT | ADVT |
| ADVR | ADVT | ADVT |
| ADVTG | ADVT | ADVT |
| ADVERTISNG | ADVT | ADVT |
| ADVERTISIN | ADVT | ADVT |
| AFFILIATE | AFFL | AFFL |
| AFFILIATES | AFFL | AFFL |
| AFFILIATIONS | AFFL | AFFL |
| AFFILIATION | AFFL | AFFL |
| AFFILIATED | AFFL | AFFL |
| AGENC | AGCY | AGCY |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| AGENCY | AGCY | AGCY |
| AGNCY | AGCY | AGCY |
| AGENCIES | AGCY | AGCY |
| AGRICULTURE | AGRI | AGRI |
| AGRCLTRL | AGRI | AGRI |
| AGRICULTURAL | AGRI | AGRI |
| ALGNMNT | ALIGN | ALIGN |
| ALIGNMT | ALIGN | ALIGN |
| ALIMENT | ALIGN | ALIGN |
| ALIGNMNT | ALIGN | ALIGN |
| ALGNMT | ALIGN | ALIGN |
| ALIGNMENT | ALIGN | ALIGN |
| ALIGNMENTS | ALIGN | ALIGN |
| ALIGNING | ALIGN | ALIGN |
| ALIG | ALIGN | ALIGN |
| ALLIANCE | ALLNCE | ALLNCE |
| ALARM | ALRM | ALRM |
| ALARMS | ALRM | ALRM |
| ALUMINUM | ALUMN | ALUMN |
| ALUM | ALUMN | ALUMN |
| AMERICA | AMER | AMER |
| AMERICAN | AMER | AMER |
| AMMONIA | AMMN | AMMN |
| NH3 | AMMN | AMMN |
| AMMUNITION | AMMO | AMMO |
| && | AND | AND |
| & | AND | AND |
| + | AND | AND |
| ANAL | ANLYST | ANLYST |
| ANLYS | ANLYST | ANLYST |
| ANALYS | ANLYST | ANLYST |
| ANALYSIS | ANLYST | ANLYST |
| ANALYST | ANLYST | ANLYST |
| ANLST | ANLYST | ANLYST |
| ANALY | ANLYST | ANLYST |
| ANALYTIC | ANLYST | ANLYST |
| ANALYTICAL | ANLYST | ANLYST |
| ANIMAL | ANML | ANML |
| ANIML | ANML | ANML |
| ANMAL | ANML | ANML |
| ANESTHESIA | ANESTHES | ANESTHES |
| ANESTHESIOLOGY | ANESTHES | ANESTHES |
| ANNX | ANX | ANX |
| ANNEX | ANX | ANX |
| APART | APT | APT |
| APARTMENT | APT | APT |
| ARCHITECTURE | ARCH | ARCH |
| ARCHITECTURAL | ARCH | ARCH |
| ARCHITECT | ARCH | ARCH |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| ARCHTCT | ARCH | ARCH |
| AIRP | ARPRT | ARPRT |
| AIRPT | ARPRT | ARPRT |
| AIRPORTS | ARPRT | ARPRT |
| AIRPORT | ARPRT | ARPRT |
| ARPT | ARPRT | ARPRT |
| ARSENAL | ARSNL | ARSNL |
| ASSEM | ASMBLY | ASMBLY |
| ASSEMBLY | ASMBLY | ASMBLY |
| ASSEMBLE | ASMBLY | ASMBLY |
| ASSEMBLER | ASMBLY | ASMBLY |
| ASSOCIATIONS | ASSOC | |
| ASSCO | ASSOC | |
| ASSCE | ASSOC | |
| ASSOCATE | ASSOC | |
| ASSOCIA | ASSOC | |
| ASSOCI | ASSOC | |
| ASSOCIATES | ASSOC | |
| ASSOCIATED | ASSOC | |
| ASSOCIATE | ASSOC | |
| ASSOCIAT | ASSOC | |
| ASSO | ASSOC | |
| ASSC | ASSOC | |
| ASO | ASSOC | |
| ASOC | ASSOC | |
| ASS | ASSOC | |
| ASSOCIATION | ASSOC | |
| ASSCD | ASSOC | |
| ASSOD | ASSOC | |
| ASSOCATED | ASSOC | |
| ASSURE | ASSURNC | ASSURNC |
| ASSRNC | ASSURNC | ASSURNC |
| ASSURANCE | ASSURNC | ASSURNC |
| ASSUR | ASSURNC | ASSURNC |
| AUTHORI | ATHRTY | ATHRTY |
| AUTHY | ATHRTY | ATHRTY |
| AUTHORITIES | ATHRTY | ATHRTY |
| AUTHORITY | ATHRTY | ATHRTY |
| AUTH | ATHRTY | ATHRTY |
| ATN | ATTN | ATTN |
| ATTENTION | ATTN | ATTN |
| ATTNTN | ATTN | ATTN |
| AUTOMOBILE | AUTO | AUTO |
| AUTOMOTIVE | AUTO | AUTO |
| AUXIL | AUX | AUX |
| AUXILIARY | AUX | AUX |
| AUXILRY | AUX | AUX |
| AUXILARY | AUX | AUX |
| AV | AVE | AVE |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| AVENUE | AVE | AVE |
| BAPTIST | BAPT | BAPT |
| BPTST | BAPT | BAPT |
| BAT | BATT | BATT |
| BATTERIES | BATT | BATT |
| BATTERY | BATT | BATT |
| BTRY | BATT | BATT |
| BARBEQUE | BBQ | BBQ |
| BARBQUE | BBQ | BBQ |
| BEACH | BCH | BCH |
| BRD | BOARD | BOARD |
| BD | BOARD | BOARD |
| BEVERAGE | BEV | BEV |
| BEVERAGES | BEV | BEV |
| BICYCLE | BIKE | BIKE |
| BIOTECHNOLOGY | BIOTECH | BIOTECH |
| BANK | BNK | BNK |
| BUILDING | BLDG | BLDG |
| BUILDINGS | BLDG | BLDG |
| BUILDER | BLDR | BLDR |
| BOULEVARD | BLVD | BLVD |
| BOROUGH | BORO | BORO |
| BRDGE | BRG | BRG |
| BRIDGE | BRG | BRG |
| BARREL | BRL | BRL |
| BROTHER | BROS | BROS |
| BROTHERS | BROS | BROS |
| BREWING | BREW | BREW |
| BREWERY | BREW | BREW |
| BOTLER | BTLG | BTLG |
| BOTLNG | BTLG | BTLG |
| BOTTLING | BTLG | BTLG |
| BTLNG | BTLG | BTLG |
| BTLR | BTLG | BTLG |
| BTTLR | BTLG | BTLG |
| BSNS | BUSN | BUSN |
| BUSINESS | BUSN | BUSN |
| BUSN | BUSN | BUSN |
| BUSINES | BUSN | BUSN |
| CAPTAIN | CAPT | CAPT |
| CPT | CAPT | CAPT |
| CATHOLIC | CATH | CATH |
| CTHLC | CATH | CATH |
| CABINET | CBNT | CBNT |
| CABINETMAKER | CBNT | CBNT |
| CABINETRY | CBNT | CBNT |
| CABINETS | CBNT | CBNT |
| CEMENT | CEM | CEM |
| CERTD | CERT | CERT |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| CERTIFIE | CERT | CERT |
| CERTIFIED | CERT | CERT |
| CERTIF | CERT | CERT |
| CHEMCAL | CHEM | CHEM |
| CHEMICAL | CHEM | CHEM |
| CHEMICALS | CHEM | CHEM |
| CHEMIST | CHEM | CHEM |
| CHEMISTS | CHEM | CHEM |
| CHEMS | CHEM | CHEM |
| CHMST | CHEM | CHEM |
| CHEVROLET | CHEVY | CHEVY |
| CHEV | CHEVY | CHEVY |
| CHICKEN | CHICK | CHICK |
| CHKN | CHICK | CHICK |
| CHCKN | CHICK | CHICK |
| CHILD | CHLD | CHLD |
| CHILDHOOD | CHLD | CHLD |
| CHILDREN | CHLD | CHLD |
| CHILDRENS | CHLD | CHLD |
| CHILDS | CHLD | CHLD |
| CHLDHD | CHLD | CHLD |
| CHLDRN | CHLD | CHLD |
| CHUR | CHURCH | CHURCH |
| CHRCH | CHURCH | CHURCH |
| CHURC | CHURCH | CHURCH |
| CLEANG | CLNR | CLNR |
| CLEANER | CLNR | CLNR |
| CLEANING | CLNR | CLNR |
| CLEANERS | CLNR | CLNR |
| CLEANSER | CLNR | CLNR |
| CLOTHING | CLTHS | CLTHS |
| CLOTHES | CLTHS | CLTHS |
| CMMNTY | CMNTY | CMNTY |
| COMMUNITY | CMNTY | CMNTY |
| ACADEMY | ACDMY | ACDMY |
| ACADEM | ACDMY | ACDMY |
| ACAD | ACDMY | ACDMY |
| ADHESIVES | ADHSV | ADHSV |
| ADHESIVE | ADHSV | ADHSV |
| ADMIN | ADMN | ADMN |
| ADMSTRN | ADMN | ADMN |
| COMNTY | CMNTY | CMNTY |
| CMTY | CMNTY | CMNTY |
| CMPR | CMPSR | CMPSR |
| CMPRSR | CMPSR | CMPSR |
| CMPRSSR | CMPSR | CMPSR |
| COMPRESSOR | CMPSR | CMPSR |
| CAMPSITE | CMPST | CMPST |
| CAMPGROUND | CMPST | CMPST |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| COMPUTING | CMPTR | CMPTR |
| COMPUTER | CMPTR | CMPTR |
| COMPTR | CMPTR | CMPTR |
| COMPU | CMPTR | CMPTR |
| CONFERENCE | CONF | CONF |
| CONFRENCE | CONF | CONF |
| CONTG | CNTRCT | CNTRCT |
| CONTR | CNTRCT | CNTRCT |
| CONTRAC | CNTRCT | CNTRCT |
| CONTRACT | CNTRCT | CNTRCT |
| CONTRACTIN | CNTRCT | CNTRCT |
| CONTRACTING | CNTRCT | CNTRCT |
| CONTRACTOR | CNTRCT | CNTRCT |
| CONTRACTORS | CNTRCT | CNTRCT |
| CONTRG | CNTRCT | CNTRCT |
| CONTRL | CONTRL | CONTRL |
| CONTROL | CONTRL | CONTRL |
| CTL | CONTRL | CONTRL |
| CTRL | CONTRL | CONTRL |
| COUNTRY | CNTRY | CNTRY |
| COUNTRYSIDE | CNTRY | CNTRY |
| COUNTY | CNTY | CNTY |
| COMP | CO | |
| COMPANY | CO | |
| COMPANIES | CO | |
| COMPAN | CO | |
| COMPNAY | CO | |
| COMPNY | CO | |
| COLLECTOR | COLLECT | COLLECT |
| COLLECTORS | COLLECT | COLLECT |
| CLCTN | COLLECT | COLLECT |
| COLLECTION | COLLECT | COLLECT |
| COLLECTIONS | COLLECT | COLLECT |
| COLLECTN | COLLECT | COLLECT |
| COMMUN | COMM | COMM |
| COMMUNICATI | COMM | COMM |
| COMMUNICATION | COMM | COMM |
| COMMUNICATIONS | COMM | COMM |
| COMMUNICTN | COMM | COMM |
| CNDMNM | CONDO | CONDO |
| CONDOMINIUMS | CONDO | CONDO |
| CONDOMINIUM | CONDO | CONDO |
| CONDOS | CONDO | CONDO |
| CNSRVTN | CONSERVE | CONSERVE |
| CNSVTN | CONSERVE | CONSERVE |
| CONSER | CONSERVE | CONSERVE |
| CONSERV | CONSERVE | CONSERVE |
| CONSERVATION | CONSERVE | CONSERVE |
| CONSTRUCTION | CONSTRCTN | CONSTRCTN |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| CONSTRUCTOR | CONSTRCTN | CONSTRCTN |
| CONSTRUCT | CONSTRCTN | CONSTRCTN |
| CNST | CONSTRCTN | CONSTRCTN |
| CNSTR | CONSTRCTN | CONSTRCTN |
| CNSTRCTN | CONSTRCTN | CONSTRCTN |
| CONST | CONSTRCTN | CONSTRCTN |
| CONSTN | CONSTRCTN | CONSTRCTN |
| CONSTR | CONSTRCTN | CONSTRCTN |
| CONSTRN | CONSTRCTN | CONSTRCTN |
| CONSTRTN | CONSTRCTN | CONSTRCTN |
| CONSTRUCTN | CONSTRCTN | CONSTRCTN |
| CNTRCTR | CNTRCT | CNTRCT |
| COOPERATIVES | COOP | COOP |
| COOPERATIVE | COOP | COOP |
| CORPORATION | CORP | |
| REMANUFACTURING | REMFG | REMFG |
| REMANUFACTURER | REMFG | REMFG |
| REMANUFACTURERS | REMFG | REMFG |
| TERMINALING | TERML | TERML |
| TRANSMISSION | TRANS | TRANS |
| TRANSMSSN | TRANS | TRANS |
| TRANSPORT | TRANSP | TRANSP |
| TRANSPORTERS | TRANSP | TRANSP |
| TRANSPORTER | TRANSP | TRANSP |
| TRANSPORTATION | TRANSP | TRANSP |
| TRNSPRT | TRANSP | TRANSP |
| TRNSPRTN | TRANSP | TRANSP |
| TOWNSHIP | TWP | TWP |
| TWNSHP | TWP | TWP |
| UNIVERSITIES | UNIV | UNIV |
| UNIVERSITY | UNIV | UNIV |
| USA | US | US |
| UNITED STATES OF AMERICA | US | US |
| UNITED STATES | US | US |
| UTILITIES | UTIL | UTIL |
| UTILITY | UTIL | UTIL |
| VETERINARIAN | VET | VET |
| WAREHOUSE | WHSE | WHSE |
| WHS | WHSE | WHSE |
| ONE | 1 | 1 |
| TWO | 2 | 2 |
| THREE | 3 | 3 |
| FOUR | 4 | 4 |
| FIVE | 5 | 5 |
| SIX | 6 | 6 |
| SEVEN | 7 | 7 |
| EIGHT | 8 | 8 |
| NINE | 9 | 9 |
| TEN | 10 | 10 |

| FULL_NAME | ABBR_NAME | REPL_NAME |
|---|---|---|
| ELEVEN | 11 | 11 |
| TWELVE | 12 | 12 |
| THIRTEEN | 13 | 13 |
| FOURTEEN | 14 | 14 |
| FIFTEEN | 15 | 15 |
| SIXTEEN | 16 | 16 |
| SEVENTEEN | 17 | 17 |
| EIGHTEEN | 18 | 18 |
| NINETEEN | 19 | 19 |
| TWENTY | 20 | 20 |

## 10.0 APPENDIX B: Standardized Address Data Values

| FULL_NAME | ABBR_NAME |
|---|---|
| ALLEY | ALY |
| ARCADE | ARC |
| AVENUE | AVE |
| AV | AVE |
| BOULEVARD | BLVD |
| COURT | CT |
| CIR | CIRCLE |
| CRK | CREEK |
| FREEWAY | FWY |
| HIGHWAY | HWY |
| HIWAY | HWY |
| HWYS | HWY |
| PLZ | PLAZA |
| PLC | PLACE |
| TER | TERRACE |
| MILES | MI |
| NORTHEAST | NE |
| NORTHWEST | NW |
| SOUTHEAST | SE |
| SOUTHWEST | SW |
| ROUTE | ROUTE |
| RRTE | ROUTE |
| RR | ROUTE |
| FIRST | 1ST |
| SECOND | 2ND |
| THIRD | 3RD |
| FOURTH | 4TH |
| FIFTH | 5TH |
| SIXTH | 6TH |
| SEVENTH | 7TH |
| EIGHTH | 8TH |
| BL | BLVD |
| TENTH | 10TH |
| RT | ROUTE |
| EXPRESSWAY | EXPY |
| ONE | 1 |
| MILE | MI |
| NINETH | 9TH |
| MILEPOST | MP |
| SQ | SQUARE |
| RRT | ROUTE |
| AVENIDA | AVE |
| LN | LANE |
| INDUSTRIAL | INDL |
| PL | PLACE |
| IND | INDL |
| FORT | FT |

| FULL_NAME | ABBR_NAME |
|---|---|
| SO | SOUTH |
| TWO | 2 |
| PK | PARK |
| PT | POINT |
| TNPK | TURNPIKE |
| TPKE | TURNPIKE |
| HEIGHTS | HTS |
| STREETS | ST |
| ROUTES | ROUTE |
| EXTENSION | EXT |
| STS | ST |
| SUITE | STE |
| ALLEE | ALY |
| ALLY | ALY |
| ANEX | ANX |
| ANNEX | ANX |
| ANNX | ANX |
| AVEN | AVE |
| AVENU | AVE |
| AVN | AVE |
| AVNUE | AVE |
| BAYOO | BYU |
| BAYOU | BYU |
| BEACH | BCH |
| BEND | BND |
| BLUF | BLF |
| BLUFF | BLF |
| BLUFFS | BLF |
| BOT | BTM |
| BOTTM | BTM |
| BOTTOM | BTM |
| BOUL | BLVD |
| BOULV | BLVD |
| BR | BRANCH |
| BRNCH | BRANCH |
| BRG | BRIDGE |
| BRDGE | BRIDGE |
| BRK | BROOK |
| BROOKS | BROOK |
| BYPA | BYP |
| BYPAS | BYP |
| BYPASS | BYP |
| BYPS | BYP |
| CAMP | CP |
| CMP | CP |
| CANYN | CYN |
| CANYON | CYN |

| FULL_NAME | ABBR_NAME |
|---|---|
| CNYN | CYN |
| CAPE | CPE |
| CAUSEWAY | CSWY |
| CAUSWAY | CSWY |
| CEN | CTR |
| CENT | CTR |
| CENTER | CTR |
| CENTR | CTR |
| CENTRE | CTR |
| CNTER | CTR |
| CNTR | CTR |
| CENTERS | CTR |
| CIRC | CIRCLE |
| CIRCL | CIRCLE |
| CRCL | CIRCLE |
| CRCLE | CIRCLE |
| CIRCLES | CIRCLE |
| CLIFF | CLF |
| CLIFFS | CLF |
| CLFS | CLF |
| CLB | CLUB |
| CMN | COMMON |
| COMMONS | COMMON |
| JUNCTION | JCT |
| CORS | CORNER |
| CORNERS | CORNER |
| CRT | CT |
| COURTS | CT |
| COURSE | CRSE |
| COVE | CV |
| COVES | CV |
| CK | CREEK |
| CRECENT | CRESCENT |
| CRES | CRESCENT |
| CRESENT | CRESCENT |
| CRSCNT | CRESCENT |
| CRSENT | CRESCENT |
| CRSNT | CRESCENT |
| XING | CROSSING |
| CRSSING | CROSSING |
| CRSSNG | CROSSING |
| XRD | CROSSROAD |
| CURV | CURVE |
| DR | DRIVE |
| DRV | DRIVE |
| DRIVES | DRIVE |
| EXPW | EXPY |
| EXP | EXPY |
| EXPR | EXPY |

| FULL_NAME | ABBR_NAME |
|---|---|
| EXPRESS | EXPY |
| EXTN | EXT |
| EXTNSN | EXT |
| EXTENSIONS | EXT |
| FALLS | FLS |
| FRRY | FERRY |
| FRY | FERRY |
| FLD | FIELD |
| FLDS | FIELD |
| FIELDS | FIELD |
| FLAT | FLT |
| FLATS | FLT |
| FORD | FRD |
| FORDS | FRD |
| FORESTS | FOREST |
| FORGE | FRG |
| FORGES | FRG |
| FORK | FRK |
| FORKS | FRK |
| FREEWY | FWY |
| FRWAY | FWY |
| FRWY | FWY |
| GARDEN | GDN |
| GARDN | GDN |
| GRDEN | GDN |
| GRDN | GDN |
| GARDENS | GDN |
| GDNS | GDN |
| GRDNS | GDN |
| GATEWAY | GTWY |
| GATEWY | GTWY |
| GATWAY | GTWY |
| GLN | GLEN |
| GLENS | GLEN |
| GROV | GROVE |
| GROVES | GROVE |
| HARBOR | HBR |
| HARBR | HBR |
| HARB | HBR |
| HARBORS | HBR |
| HRBOR | HBR |
| HVN | HAVEN |
| HAVN | HAVEN |
| HEIGHT | HTS |
| HGTS | HTS |
| HIGHWY | HWY |
| HIWY | HWY |
| HWAY | HWY |
| INLET | INLT |

| FULL_NAME | ABBR_NAME |
|---|---|
| ISLND | ISLAND |
| ISLANDS | ISLAND |
| ISLNDS | ISLAND |
| ISS | ISLAND |
| ISLES | ISLE |
| JCTION | JCT |
| JCTN | JCT |
| JUNCTN | JCT |
| JUNCTON | JCT |
| JCTNS | JCT |
| JCTS | JCT |
| JUNCTONS | JCT |
| KEYS | KEY |
| KYS | KEY |
| LAKES | LAKE |
| LKS | LAKE |
| LANDING | LNDG |
| LNDNG | LNDG |
| LA | LANE |
| LANES | LANE |
| LODG | LODGE |
| LDGE | LODGE |
| LOOPS | LOOP |
| MNR | MANOR |
| MANORS | MANOR |
| MNRS | MANOR |
| MDW | MEADOW |
| MDWS | MEADOW |
| MEADOWS | MEADOW |
| MEDOWS | MEADOW |
| MILLS | MILL |
| MOTORWAY | MTWY |
| MNT | MOUNT |
| MNTAIN | MTN |
| MNTN | MTN |
| MOUNTAIN | MTN |
| MOUNTIN | MTN |
| MTIN | MTN |
| MNTNS | MTN |
| MOUNTAINS | MTN |
| ORCH | ORCHARD |
| ORCHRD | ORCHARD |
| OVAL | OVL |
| OPAS | OVERPASS |
| POB | POBOX |
| PO BOX | POBOX |
| P O BOX | POBOX |
| POST OFFICE BOX | POBOX |
| DRAWER | POBOX |

| FULL_NAME | ABBR_NAME |
|---|---|
| CALL BOX | POBOX |
| URB | URBANIZATION |
| URBANIZACION | URBANIZATION |
| NORTE | NORTH |
| NORESTE | NE |
| NOROESTE | NW |
| SUR | SOUTH |
| SURESTE | SE |
| SUROESTE | SW |
| ESTE | EAST |
| OESTE | WEST |
| VSTA | VISTA |
| VST | VISTA |
| VIST | VISTA |
| VIS | VISTA |
| VL | VILLE |
| VLGS | VILLAGE |
| VLG | VILLAGE |
| VILLIAGE | VILLAGE |
| VILLG | VILLAGE |
| VILLAG | VILLAGE |
| VILL | VILLAGE |
| VWS | VIEW |
| VW | VIEW |
| VIADCT | VIADUCT |
| VIA | VIADUCT |
| VDCT | VIADUCT |
| VLYS | VALLEY |
| VLY | VALLEY |
| VLLY | VALLEY |
| VALLY | VALLEY |
| UN | UNION |
| UPAS | UNDERPASS |
| TURNPK | TURNPIKE |
| TRPK | TURNPIKE |
| TRNPK | TURNPIKE |
| TPK | TURNPIKE |
| TUNNL | TUNNEL |
| TUNEL | TUNNEL |
| TUNL | TUNNEL |
| TUNLS | TUNNEL |
| TRLS | TRAIL |
| TR | TRAIL |
| TRFY | TRAFFICWAY |
| TRKS | TRACK |
| TRK | TRACK |
| TRAK | TRACK |
| TRWY | THROUGHWAY |
| TERR | TERRACE |

| FULL_NAME | ABBR_NAME |
|---|---|
| SUMIT | SUMMIT |
| SUMITT | SUMMIT |
| SMT | SUMMIT |
| STRT | ST |
| STR | ST |
| STN | STATION |
| STATN | STATION |
| STA | STATION |
| SQRS | SQUARE |
| SQU | SQUARE |
| SQRE | SQUARE |
| SQR | SQUARE |
| SPRNGS | SPRINGS |
| SPNGS | SPRINGS |
| SPGS | SPRINGS |
| SPRNG | SPRING |
| SPNG | SPRING |
| SPG | SPRING |
| SKWY | SKYWAY |
| SHRS | SHORE |
| SHOARS | SHORE |
| SHR | SHORE |
| SHOAR | SHORE |
| SHLS | SHOAL |
| SHL | SHOAL |
| RDS | ROAD |
| RVR | RIVER |
| RIVR | RIVER |
| RIV | RIVER |
| RDGS | RIDGE |
| RDG | RIDGE |
| RDGE | RIDGE |
| RNCHS | RANCH |
| RNCH | RANCH |
| PRARIE | PRAIRIE |
| PTS | POINT |
| PLNS | PLAINS |
| PLN | PLAIN |
| PNES | PINES |
| PSGE | PASSAGE |
| PKWYS | PARKWAY |
| PKWY | PARKWAY |
| PKY | PARKWAY |
| PKWAY | PARKWAY |

| FULL_NAME | ABBR_NAME |
|---|---|
| PARKWY | PARKWAY |
| PRK | PARK |
| RFD | ROUTE |
| APPROX | |
| ABOUT | |
| JCT | |
| TRL | TRAIL |
| INTERSECTION | |
| INTERSEC | |
| BETWEEN | |
| AROUND | |
| ON | |
| LOCATED | |
| THE | |
| NEAR | |
| AT | |
| COR | CORNER |
| RD | ROAD |
| RTS | ROUTE |
| RTE | ROUTE |
| BLOCK | BLK |
| ELEVENTH | 11TH |
| TWELFTH | 12TH |
| THIRTEENTH | 13TH |
| FOURTEENTH | 14TH |
| FIFTEENTH | 15TH |
| SIXTEENTH | 16TH |
| SEVENTEENTH | 17TH |
| EIGHTEENTH | 18TH |
| NINETEENTH | 19TH |
| TWENTIETH | 20TH |
| THIRTIETH | 30TH |
| FORTIETH | 40TH |
| FIFTIETH | 50TH |
| SIXTIETH | 60TH |
| SEVENTIETH | 70TH |
| EIGHTIETH | 80TH |
| NINETIETH | 90TH |
| HYWAY | HWY |
| BUILDING | BLDG |
| STREET | ST |
| STREEET | ST |
| WAY | WY |

## 11.0 APPENDIX C: Standardized City and County Data Values

| NAME | STD_NAME |
|---|---|
| AFB | |
| AIR FORCE BASE | |
| BCH | BEACH |
| BORO | |
| BOROUGH | |
| BYU | BAYOU |
| C | |
| CA | CALIFORNIA |
| CIT | |
| CITY | |
| CNTR | CENTER |
| CNTY | |
| COLO | CO |
| COLORADO | CO |
| COMPANY | CO |
| CORNERS | CORNER |
| COUNTY | |
| CT | CONNECTICUT |
| CTR | CENTER |
| CTY | |
| CY | |
| DC | DISTRICTOFCOLUMBIA |
| DIV | |
| EAST | E |
| EASTWEST | EW |
| FORT | FT |
| HEIGHTS | HEIGHT |
| HGT | HEIGHT |
| HGTS | HEIGHT |
| HTS | HEIGHT |
| IL | ILLINOIS |
| IN | INDIANA |
| IS | ISLAND |
| ISL | ISLAND |
| ISLE | ISLAND |
| ISLND | ISLAND |
| JCT | JUNCTION |
| JUNC | JUNCTION |
| KC | KANSAS |
| KS | KANSAS |
| KY | KENTUCKY |
| LK | LAKE |
| MD | MARYLAND |
| ME | MAINE |
| MH | MARSHALLISLANDS |
| MI | MICHIGAN |
| MOUNT | MT |
| MOUNTAIN | MT |

| NAME | STD_NAME |
|---|---|
| MTN | MT |
| NE | NEBRASKA |
| NEAR | |
| NEARBY | |
| NJ | NEWJERSEY |
| NO | N |
| NORTH | N |
| NORTHEAST | NE |
| NORTHWEST | NW |
| NV | NEVADA |
| NYC | NEWYORK |
| OH | OHIO |
| PARK | PK |
| PEAK | PK |
| PHX | PHOENIX |
| POINT | PT |
| POINTE | PT |
| PORT | PT |
| SAINT | ST |
| SHORES | SHORE |
| SO | S |
| SOUTH | S |
| SOUTHEAST | SE |
| SOUTHWEST | SW |
| SPG | SPRING |
| SPGS | SPRING |
| SPRINGS | SPRING |
| STA | ST |
| STATION | ST |
| STE | ST |
| STREET | ST |
| THE | |
| TN | TENNESSEE |
| TOWNSHIP | |
| TWNSP | |
| TWP | |
| TX | TEXAS |
| UNICORP | |
| UNINCORP | |
| UNINCORPORATED | |
| UNIV | UNIVERSITY |
| UNIVER | UNIVERSITY |
| VA | VIRGINIA |
| VLY | VALLEY |
| CENTRE | CENTER |
| NY | NEWYORK |