

United States Address Fabric

Version 2019.04.3

Product Guide



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1 - Introduction

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Product File Naming

The compressed file with nationwide coverage is named USA_AddressFabric_YYYYMM.zip. The compressed file with statewide coverage is named XX_AddressFabric_YYYYMM.zip, where XX represents the two-letter state abbreviation. In both instances, YYYYMM represents the product vintage year and month.

Zip File Contents

Following are the files that are bundled in Nation zip:

- AddressFabric_Data_Doc_Stub.pdf
- AddressFabric_Product_Metrics.xlsx
- US_AddressFabric.txt
- US_AddressFabric_changelog.txt

Following are the files that are bundled in State zip:

- AddressFabric_Data_Doc_Stub.pdf
- AddressFabric_Product_Metrics.xlsx
- {StateAbbr}_AddressFabric.txt
- {StateAbbr}_AddressFabric_changelog.txt

For statewide files, XX represents the two-letter state abbreviation.

Data Specifications

Geography Level	Nationwide and State
Release Frequency	Quarterly
Volume Size (Typical)	16GB (unzipped Nationwide File)
File Format	Tab-separated text file
Header?	Yes
Character Encoding	UTF-8

Line Feed	Linux
Projection	WGS84 (Latitude/Longitude)
Master Location Data Geocoding Version	2019.04

Note: For instructions on using the Address Fabric, please refer to the Getting Started Guide

Product Description

The United States Address Fabric is a high-quality current inventory of all known nationwide address locations, provided in a flat file format. The file contains both postal and non-postal addresses, where each record is pre-geocoded to provide the highest precision coordinate location. All addresses are verified, validated and standardized through an extensive address hygiene process and contain only primary street and city names. Each record is then assigned a unique and persistent identifier called the pbKey.

The Address Fabric can be used for location (spatial) analytics, mapping and display, address database management, service area or asset management delineation, prospect analysis, and direct mailing.

The pbKey within the Address Fabric dataset can be used for data management and maintenance of the address records in association with the packaged Change Log. It can also be used to associate Pitney Bowes prebuilt GeoEnrichment datasets, preprocessed with the pbKey such as property attributes, demographics, or insurance risk attribution.

The product includes a Change Log file to allow users to leverage the pbKey™ to perform incremental updates with each release. The **file layout** is same as the United States Address Fabric dataset but includes an additional “CHANGE” field that contains the following values:

- A = Add record
- D = Delete record
- U = Update record

These values help customers understand what action is necessary to perform the incremental updates on their address database.



The pbKey is assigned to each record in the Address Fabric Product using Pitney Bowes (PB) Geocoding technology, specifically the reference dataset call Master Location Data (MLD). In addition to current address records, the MLD retains historical and alias records (secondary street names and/or secondary/vanity city names). Therefore, within the encrypted MLD geocoding dataset, multiple addresses can have the same pbKey (see example below).

PBKEY	ADD_NUMBER	STREETNAME	UNIT_DES	UNIT_NUM	CITY	STATE	ZIPCODE	TYPE	FIPS	LAT	LON	PARENT	PROP_TYPE
P00003PZ7NPO	3390	28TH ST			BOULDER	CO	80301	P02	8130122033002	40.036125	-105.257721		B
P00003PZ7NPO	3390	CO-116			BOULDER	CO	80301	P02	8130122033002	40.036125	-105.257721		B
P00003PZ7NPO	3390	US-36			BOULDER	CO	80301	P02	8130122033002	40.036125	-105.257721		B

Figure 1: Example of alias records for one location. The Address Fabric will keep the primary street name of “28th ST.” Our Master Location Data will retain the State and US alternate highway names as well.

Through PB Geocoding technology, parent-child relationships are built between base addresses (buildings) and their secondary addresses (units within the building). In this scenario, multiple pbKeys can reside at the same coordinate location. This behavior exists in the Address Fabric because we consider the building and units within that building unique addresses.

Relationships between addresses are examined and updated with each data update. In few cases where address relationships cannot be made for a given release (i.e. primary to alias names or parent and child relationships) the records will be assigned different pbKeys. Once the relationship between records is identified a pbKey consolidation process will occur, however all historical information (including pbKey) is retained in the MLD. Any changes to pbKeys are reflected in the Address Fabric Change Log, and genealogy of an address can be obtained using the reverse pbKey function in the MLD Geocoder.

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Address Fabric Data Layout

Position	Field	Max. Length	Description
01	PBKEY	12	Unique identifier for address.
02	ADD_NUMBER	11	House number
03	STREETNAME	60	Street name
04	UNIT_DES	11	Unit type designator (Apt., Unit, etc.).
05	UNIT_NUM	11	Unit number
06	CITY	30	City name
07	STATE	2	State abbreviation
08	ZIPCODE	5	ZIP Code
09	TYPE	4	Location type. Please refer to Location Type Definitions for more information.
10	FIPS	15	Federal Information Processing Standard code. 2-digit state FIPS + 3-digit county FIPS (optional) + 1-digit Census Block Group + 3-digit Census Block.
11	LAT	9	Latitude (6 decimal places).
12	LON	11	Longitude (6 decimal places).
13	PARENT	12	pbKey™ of parent record, if applicable.

14	PROP_TYPE	2	Property type classification: B – Business M – Mixed use R – Residential X – Unknown
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Change Log Data Layout

Position	Field	Max. Length	Description
01	PBKEY	12	Unique identifier for address.
02	ADD_NUMBER	11	House number
03	STREETNAME	60	Street name
04	UNIT_DES	11	Unit type designator (Apt., Unit, etc.).
05	UNIT_NUM	11	Unit number
06	CITY	30	City name
07	STATE	2	State abbreviation
08	ZIPCODE	5	ZIP Code
09	TYPE	4	Location type. Please refer to Location Type Definitions for more information.

10	FIPS	15	Federal Information Processing Standard code. 2-digit state FIPS + 3-digit county FIPS (optional) + 1-digit Census Block Group + 3-digit Census Block.
11	LAT	9	Latitude (6 decimal places).
12	LON	11	Longitude (6 decimal places).
13	PARENT	12	pbKey™ of parent record, if applicable.
14	PROP_TYPE	2	Property type classification: B – Business M – Mixed use R – Residential X – Unknown
15	CHANGE	1	Change type: A – Added D – Deleted U – Updated

Location Type Definitions

Address Point Code	Meaning	Description
P02	Parcel centroid	Indicates the center of an assessor's parcel polygon (tract or lot). When the center of an irregularly shaped parcel falls outside of its polygon, the centroid is manually repositioned so that it falls inside of the polygon, as close to the actual center as possible.
P04	Address point	Represents a field-collected GPS point with field-collected address data.

P05	Structure centroid	<p>Indicates the center of a building footprint polygon for a building that receives mail or has telephone service.</p> <p>Residential addresses are usually associated with a single building. For sites with outbuildings (such as detached garages, sheds, barns, etc.), only the residential building(s) will have a structure point. Condominiums and duplexes have multiple points for each building. Larger buildings, such as apartment complexes, typically receive mail at one address for each building and therefore individual apartments are not represented by discrete structure points.</p> <p>Shopping malls, industrial complexes, and academic or medical center campuses where one building accepts mail for the entire complex are represented by one point. When addresses are assigned to multiple buildings within the complex, each addressed structure is represented by a point.</p> <p>If the center of a structure falls outside of its polygon, the center is manually repositioned to fall within the polygon.</p>
P07	Manually placed	An address point placed manually to coincide with the midpoint of a parcel's street frontage, at a given distance from the centerline.
P08	Front door point	Represents the designated primary entrance to a building. If a building has multiple entrances and there is no designated primary entrance or if the primary entrance cannot be determined easily, a primary entrance is chosen based on its proximity to the main access road and availability of parking.

P09	Driveway offset point	Represents a point located on the primary access road (most commonly a driveway) at a perpendicular distance of between 33 and 98 feet (10-30 meters) from the main roadway.
P10	Street access point	The primary point of access from the street network. This address point type is located where the driveway or other access road intersects the main roadway.
P21	Base parcel point	Centrus point data includes individual parcels that may be “stacked.” These stacked parcels are individually identified by their unit or suite number. GeoStan is able to match this unit number and return the correct APN. If an input address is for a building or complex, without a unit number, then the base parcel information is returned. It will not standardize to a unit number and additional information, such as the APN, will not be returned.
P22	Backfill address point	Indicates that the precise parcel centroid is unknown. Address location assigned base on two known parcel centroids.
P23	Virtual address point	Indicates that the precise parcel centroid is unknown. Address location assigned is relative to a known parcel centroid and a street segment end point.
P24	Interpolated address point	Indicates that the precise parcel centroid is unknown. Address location is assigned based on street segment end points.

3 - Frequently Asked Questions

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Frequently Asked Questions

Are ZIP+4 codes available in the address?

No. Only five-digit ZIP Codes are delivered in the United States Address Fabric. This is intentional, as ZIP+4s change and are typically needed only for direct mailing. Therefore, users should get the latest ZIP+4s using CASS geocoding or address validation software from Pitney Bowes. In the following example, pick only the first pbKey™ which will represent all other duplicate pbKey™.

Are alias street and city names maintained in the dataset?

Only primary street and city names are validated by USPS CASS Certified software. CASS Geocoding and Address Validation Software from Pitney Bowes should be used to return alias street names, as well as secondary and vanity city names.

What is the difference between Master Location Data (MLD) Geocoding dataset and the Address Fabric?

Address Fabric is closely related to, but also distinctly different from, the Master Location Data (MLD) geocoding dataset. The MLD is an encrypted reference dataset that is accessible via our Geocoding software and contains additional information such as alias addresses, vanity names, historical records, etc.; in order to facilitate advanced address matching to customer supplied address lists. Once the software makes a match, the customer address record is appended with the pbKey™, a coordinate location and (in some cases) other contextual information.

The Address Fabric is a stand-alone dataset (open flat file) which contains a current inventory of all known addresses in the US and contain primary street and city names. There is one address record for each location. The file does not contain historical or alias records (e.g. alternate street names or secondary/vanity city names).

Address Fabric is built from MLD and is typically released a month later, since it requires additional processing time. Address Fabric is released quarterly, while MLD geocoding data is release monthly.

The pbKey™ in the Address Fabric can be used in the *Reverse pbKey™* geocoding function to return alias and historical records.

Are records that have the same address and location component but different unit numbers duplicates?

No. Data records in which all address and location components except unit numbers and pbKey™ are the same are either offices (or similar) with an additional parent address record or secondary addresses, such as multiple floors, with the same parent pbKey™.

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Notices

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Product Support

If you have any questions or concerns, you may contact our support team directly by phone or email:

Software Support

- **Call:** 1.800.367.6950
- **Email:** software.support@pb.com

Technical Support

- **Visit:** <https://www.pitneybowes.com/us/support.html>

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