

MASTER ADDRESS REPOSITORY (MAR)

Frequently Asked Questions (FAQ)



Office of the Chief Technology Officer

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1. General Questions

What is the MAR?

MAR

- Is a comprehensive address database that provides a broad range of uses in the efficient delivery of government services in Washington, DC.
- Has more than 145,000 unique, valid full addresses assembled and researched from more than 25 unique sources.
- Is much more than just an address database. It contains various critical geographies for each address such as Ward and Police District, and also stores latitude and longitude
- MAR also contains information regarding intersections, blocks and place names (aliases).
- Is the applications that give access to the data in the MAR.
- Set of standards for geographical information; most notably addresses, blocks, intersections and place names (aliases).

What are the benefits of the MAR?

The MAR allows the District Government to more easily compare information across databases and agencies. The format and quality of address information varies across government systems, making it nearly impossible for government to identify all the activity associated with a given address. Now, addressing standards are built into the MAR. These standards define the valid components of DC addresses (Address ID, Number, Street Name, Street Type, and Quadrant), including their correct formatting and spelling.

Nearly, 80% of databases in local government contain some spatial data. Similarly, a large percentage of DC Government databases contain spatial data. The most common is an address. Addresses are used in all sorts of city databases including crime incidents, student records, building permits, health inspections, voter rolls and business licenses.

An address database with reliable information is critical in easily locating addresses.

How can one access the MAR?

- [MAR Location Search](#)
- MAR Web Services
- DCGISCENTRAL SDE
- [Open Data DC](#)
- MAR Geocoder
- [DC Atlas Plus](#)

Who is responsible for the MAR?

The OCTO Data Team which is part of the Office of the Chief Technology Officer is responsible for maintaining the MAR. The Department of Consumer and Regulatory Affairs (DCRA) is responsible for approving new addresses. The DC Department of Transportation (DDOT) is responsible for maintaining certain information regarding streets.

What is the MAR's Website?

<http://octo.dc.gov/node/715602>

How is the MAR maintained?

The MAR is maintained using a plethora of sources (please see the question: What are the sources for the MAR?) to ensure a high quality. The OCTO Data Team also works closely with DCRA employees who are responsible for approving new addresses. DCRA employees add newly approved addresses directly to the MAR.

Does MAR have a slogan?

Yes. It is "Every address is important."

Is there a glossary of terms for the MAR?

No, there is not a glossary of terms that is exclusively used in the MAR. The OCTO Data Team does have a general GIS Glossary of Terms which includes MAR terms and is located on our website at:

<http://octo.dc.gov/page/dc-gis-glossary>

Where can one find additional documentation regarding the MAR?

On the MAR Website there is a large amount of documentation. The website is located at:

<http://octo.dc.gov/node/715602>

Who can be contacted regarding MAR issues?

OCTO GIS: dcgis@dc.gov

2. MAR Address Table

Why can't a particular address be found in the MAR?

There are multiple reasons why addresses cannot be found in the MAR. Here are the most common reasons:

- Address does not exist
- Misspelled street name
- Wrong Street Type
- Wrong Quadrant
- The address exists, but the MAR is missing it.
- Recognized as a unit in MAR and an address number suffix in the submitted address

There can be multiple reasons why a submitted address is not in the MAR. It is very unlikely that an address that exists will not be found in the MAR.

One can confirm if the address is deliverable via the United States Postal Service at <http://zip4.usps.com/zip4/welcome.jsp> . [Newly approved addresses as well as addresses for demolished buildings are unlikely to be deliverable (receiving Postal Server mail delivery).]

Addresses that are not found using the MAR and which are located along a valid address range on a street have the option of being submitted for review to knowledgeable address specialists. The MAR Location Search is located at <http://dcatlas.dcgis.dc.gov/mar/> . Go to the site and type in an address and click submit. If the address is within a valid address range, and it is not in the MAR an option will appear entitled 'Select this link to report a New Location or to change an existing location,' Click on the link and fill in the form. Click 'Submit for Verification'. A member of the OCTO Data Team will research the address and respond within a couple of business days.

What geographies (areas) are associated with an address?

- Ward
- Voter Precinct
- Police District
- Police Service Area
- ZipCode
- Neighborhood Cluster
- Single Member District (SMD)
- Advisory Neighborhood Commission (ANC)
- Census Tract (2010)
- Census Block Group (2010)
- Census Block (2010)
- Focus Improvement Area
- Assessment Neighborhood
- Assessment Sub Neighborhood
- CFSA
- HotSpot

How are individual addresses verified?

Many sources are checked during the address verification process. The more sources that recognize the candidate address, the more likely it will be added to the MAR. Below are some sources that are being used for address verification:

- United States Postal Service (USPS) Data
- Orthophotography Imagery
- Pictometry Imagery
- Street Centerlines
- Existing Addresses
- Internet Searches
- Field Research (site visit)
- Other DC Government databases

Based on these sources the OCTO Data Team will determine if an address is valid and can thus be digitized and included in the MAR. Addresses for which there is minimal evidence will not be added to the MAR.

Sometimes, it is determined that the address cannot be solved in the office environment and thus field research is required. However, it is preferable to solve address issues in the office environment rather than physically visiting the site. Field research consumes much time, but it is often necessary as part of the address verification process.

What about addresses for buildings that have been demolished?

If the building has been demolished since about 2002 it should be contained in the MAR as an address whose status is 'RETIRE'. However, if a new building has been completed which has the same full address as the demolished building the address will have a status of 'ACTIVE' and have its location reflect the current building which uses that address.

How many addresses are there in DC?

There are about 141,000 primary addresses (does not include secondary units) in Washington, DC. There are estimated 255,000 residential units (with a secondary address designator (condos and apartments). These numbers do NOT include addresses and residential units which are retired.

Are there many cases of illogical addresses?

Yes. There are dozens of addresses that are illogical. These are illogical because they do not follow the normal rules of Washington, DC's addressing grid system. These illogical addresses are also referred to as address anomalies. An address anomalies list can be viewed and downloaded on the following website: <http://octo.dc.gov/node/715872>

The OCTO Data Team has spent hundreds of hours tracking down these cases and ensuring that the address database matches the reality on the street.

How does the MAR deal with illegal addresses?

An illegal address is an address that has not been authorized by the Department of Consumer & Regulatory Affairs (DCRA). The MAR contains both legal and illegal addresses, and does not distinguish between them. It is estimated that there are thousands of illegal addresses in Washington, DC. It is the responsibility of DCRA to enforce the laws regarding addresses.

What about addresses located in alleys?

Almost every address which is located in an alley is already in the MAR. The OCTO Data Team has spent a significant amount of time tracking down these addresses. The majority of these addresses have been visited by OCTO Data Team personnel. It is especially important that these addresses are properly in the MAR as they are often difficult to locate. Examples of alley addresses include GROFF COUT NE, BLAGDEN ALLEY NW, LINDEN COURT NE and POMANDER WALK NW.

What is the relationship between an address and a building?

It is a many to many relationship. One building can have multiple entrances each with its own primary address (example: office building with separate retail addresses). Also, one address can represent multiple buildings / businesses (a main house and the garage behind it). This relationship between an address and a building is not stored in the MAR.

What is the relationship between an address and a SSL (property record)?

It is a many to many relationship. One SSL (Square, Suffix, Lot) can have multiple addresses located on it. This often includes garden style apartment complexes as well as corner addresses with separate addresses facing each adjacent street. One address can also sit upon multiple properties. One single family residence can sit upon multiple lots. The address records only contain one 'base' SSL (usually comes from OwnerPly). The cross reference table contains the many to many relationship between Address ID and SSL. Some addresses do not have an associated SSL (such as metro entrances or many addresses on Federal property). In, the address table, each address record will only be associated with one SSL. That SSL will be the base SSL, which is the SSL under which the address point rests upon.

What is the difference between an address number suffix and a unit?

- 1/2 designations are always be considered address number suffixes.
- 'REAR' designations which are a separate buildings will be considered as address number suffixes. 'REAR' designations which are in the same building as the primary non 'REAR' address will be considered units.
- All numeric designations are considered to be units.
- All letter designations which are not on a separate property and also represent one. occupancy will be considered units (except for addresses on military areas).
- Address Number Suffix: 4211 A EXAMPLE STREET NE [address number suffix designation between address number and street name]
- Unit: 4211 EXAMPLE STREET NE A [unit designation after the quadrant]

Why are there addresses without address numbers?

Addresses that are lacking an address number (and thus don't have a full address) represent places that do not have an address number, but are included because it is important to identify their locations. These include places such as the Saint Elizabeth's Power House and the Albert Einstein Statue as well as the Big Chair. These records will have a value of 'PLACE' in the 'TYPE_' field. These records are all associated with an alias names (place name) in the alias table.

What about addresses that existed in the past and are not in the MAR?

As a general rule addresses that existed before the year 2002 and are not already in the MAR (as STATUS = 'RETIRE') will NOT be added to the MAR in most circumstances. Exceptions include:

- Really important historic addresses
- Addresses that appear in many DC Government Agencies' databases.

How many missing full addresses are there in Washington, DC?

It is estimated that the MAR contains more than 99.9% of all current primary addresses in Washington, DC. It is estimated that is missing less than 100 addresses. Most of these missing addresses are basement locations which have the 1/2 designation as an address number suffix.

How are addresses reactivated?

Addresses that represent existing buildings should have a status of 'ACTIVE.' If the building containing the address is demolished the address' status will change to 'RETIRE.' If a new building is built with the same address then the address will now have a status of 'ACTIVE.' [Also its coordinates will move to reflect the new building's location. Additionally there may be changes in the address' property identifiers.]

How does the MAR deal with empty lots?

Usually, empty lots will not have an address record associated with it. However, if there is a DCRA approved address for the lot, there should be an address record whose status is 'assigned'. If there was a building, that existed on the lot between 1999 to last year, and that building was demolished then it is highly likely that there will be an address record whose status is 'RETIRE'. The 'RETIRE' status indicates that the building is demolished and / or that the address is no longer in existence.

It is of low importance to the MAR Data Team to add new addresses for buildings that were demolished many years ago. (their status would be 'RETIRE').

How spatially accurate are the Address Records?

The address records have a very high level of spatial accuracy. Address records should be located either at or near the center of the building or near the main entrance of the address.

It is estimated that there are less than 70 addresses (~ .05%) that are not located within the correct building footprint. There has been a tremendous amount of time (thousands of hours) invested in ensuring a very high level of spatial accuracy. This allows for excellent point in polygon analysis.

What do the different statuses in the address table mean?

- **ACTIVE** - addresses for buildings or structures which are currently standing. The overwhelming majority of addresses have the 'ACTIVE' status.
- **ASSIGNED** - addresses which have been assigned (approved) by DCRA, but whose buildings have not yet been constructed.
- **RETIRE** - addresses for buildings that have been demolished or for addresses which represented space which has since been occupied by a different address (example: a retail store closing and being taken over by a neighboring store which knocks the wall down)
- **TEMPORARY** - addresses which will exist for a relatively short period of time. Construction trailers, special event tents may be given this TEMPORARY designation. Addresses which have not been assigned by DCRA, and which represent buildings that are likely to be built might be given a TEMPORARY status.
- **MISTAKE** - addresses which are incorrect (these addresses never existed). These MISTAKE addresses are automatically deleted each and every weekday evening.

What are the sources for the Address Table?

The plethora of sources used for compiling the address table, is one of MAR's strengths. Below is a list of most of the sources used for the MAR:

- United States Postal Service (USPS) Data
- Address Applications (from DCRA)
- Orthophotography Imagery
- DC Department of Transportation (DDOT) - Street Centerlines
- Internet Searches
- Field Research (site visits)
- DC Employees Database
- Military Data
- Public Housing Data
- Sanborn Maps
- Building Permits
- Real Estate Databases
- Owner Points form Office of Tax & Revenue
- Mobile Video
- Vector Property Map
- Metropolitan Police Department (MPD) –ADDRESS
- Department of Motor Vehicle (DMV) - Drivers License
- DMV - Registered Vehicles
- Mayor's Call Center (MCC)
- OTR - Property Inventory
- Board of Elections (BOE) - Registered Voters

- Emergency –911 (E-911)
- Department of Consumer and Regulatory Affairs (DCRA)
- Blogs

How are new addresses issued by DC Government?

The Department of Consumer and Regulatory Affairs (DCRA) is responsible for issuing new addresses. New addresses need to be approved by DCRA. The OCTO Data Team works closely with DCRA on address issues.

For more information about obtaining a new address from DCRA:

<http://dcra.dc.gov/service/permits-get-new-dc-address>

Does the ADDRESS_ID field in the MAR contain unique values?

Yes. The ADDRESS_ID field contains unique values. Each ADDRESS_ID represents one unique address record. Leaving aside the primary addresses which are NULL (for places which do not have address number (Washington Monument)), a primary address (FULLADDRESS) are also unique and will have a one to one relationship with the ADDRESS_ID. [The SITE_ADDRESS_PK and the MARID will always have the same value as the ADDRESS_ID for any record].

How can one determine if an address is residential or not?

The RES_TYPE field contains values “RESIDENTIAL”, “MIXED USE” or ‘NON RESIDENTIAL’. All addresses are given one of these three classifications. Residential addresses include, apartments, condos, residential row houses, detached single family homes, and residential duplexes. Mixed use addresses include, apartment or condo addresses which also include retail (usually stores on the first floor), row houses which contain both apartments and offices. Non residential addresses includes, office buildings, warehouses, statues, memorials, metro stations, parks, schools and retail stores.

How does the MAR's format compare to Federal Geographic Data Committee's (FGDC) United States Thoroughfare, Landmark, and Postal Address Data Standard?

The MAR does not conform to FGDC's United States Thoroughfare, Landmark, and Postal Address Data Standard (which is located at:

<http://www.fgdc.gov/standards/projects/FGDC-standards-projects/street-address>). However, the MAR Addresses do have many columns which correspond to columns in the FGDC standard. Please see the below table.

MAR Column Name	MAR Definition	MAR Comments	MAR Example	FGDC Column Name
ADDRESS_ID	Number	Address Identifier	302001	Address ID
ROADWAYSEGID	Number	Comes from DDOT Street Spatial Database.	3633	Related Transportation Feature ID
STATUS	Text, 15	Status	RETIRE	Address Lifecycle Status
SSL	Text, 12	Square Suffix Lot	1201 0017	Address Parcel Identifier
ADDRNUM	Number	Address Number	1225	Address Number
ADDRNUMSUFFIX	Text, 6	Address Number Suffix	1/2	Address Number Suffix
STNAME	Text, 30	Street Name	NEW YORK	Street Name
STREET_TYPE	Text 50	Street Type	AVENUE	Street Name Posttype
QUADRANT	Text, 2	Quadrant	NW	Street Name Postdirectional
CITY	Text 20	City Name	WASHINGTON	Complete Place Name
STATE	Text, 2	State Name	DC	State Name
XCOORD	Number	X Coordinates (Maryland State Plan Meters)	393840.52	Address X Coordinate
YCOORD	Number	Y Coordinates (Maryland State Plan Meters)	137607.99	Address Y Coordinate
NATIONAL_GRID	Text, 18	National Grid	18S UH 25235 99754	US National Grid Coordinate
ZIPCODE	Number	Zip code	20012	ZIP Code
LATITUDE	Number	Latitude (Decimal Degrees)	38.853	Address Latitude
LONGITUDE	Number	Longitude (Decimal Degrees)	-77.013	Address Longitude

3. Non Address Tables

What are the other key non address, tables in the MAR?

- Address Alias (Place Names)
- Intersection
- Block
- Address / SSL Cross Reference
- Residential Unit
- Street Name Alias

What types of alias (place) names are in the MAR?

The Address Alias table contains building names, historical sites, statues, metro station entrances, museums, federal buildings, hospitals, embassies, hotels and more. Examples include , White House, Washington Monument, US Capitol, as well as Barney Circle. There are over 6,000 alias records, each of which is associated with an address. Using the MAR Location Search [<http://dcatlas.dcgis.dc.gov/mar/>] alias names can be searched. Each and every alias record is associated with an address record. Multiple alias records can be associated with one address record (example: address has two building names).

What is the Intersection Table?

The Intersection table contains thousands of intersections. These are locations where streets cross each other. An example is the intersection of Benning Road SE and G Street SE which is also referred to as G Street SE and Benning Road SE. There are about intersection 15,000 records.

The Intersection now contains overpasses and underpasses (these are not at grade intersections). The TYPE for these records will be 'OVERPASS' or 'UNDERPASS'. An example of an overpass is 16TH STREET NW OVER MILITARY ROAD NW.

At grade intersections which are not ramps will have a TYPE of 'REGULAR.' An example of a "REGULAR" intersection is ALABAMA AVENUE SE AND 15TH PLACE SE. Also, 'RAMP' and named 'ALLEY' intersection types are included in the intersection table.

What is the Block Table?

The block table contains over 16,000 records which describe a block. This would be from a street intersection to the next street intersection. An example is: 1500 BLOCK OF R STREET NW. This block is also known as R STREET NW BETWEEN 15TH STREET NW AND 16TH STREET NW. All blocks also have X,Y coordinates for the center of the block (the midway point along the street between the two intersections).

Many records in the MAR Block Table have address ranges of 0 - 0, How can this be?

Certain blocks do not have address number ranges due to them being special circumstances. These 0 - 0 address range cases mainly occur at:

- Highways, Freeways, Parkways (Whitehurst Freeway, E Street Expressway, Suitland Parkway)
- On some campuses (Universities, National Arboretum, Potomac Job Corps, Blue Plain Advanced Waste Water Treatment Plant).

How come records in the Block and Intersection Table are only associated with the Ward geography (area) and not associated with other geographies (PSA, SMD, ANC, Voting Precinct)?

The Block and Intersection records are only associated with the Ward geography. The Block and Intersection records are not associated with other geographies (areas; ex: police districts or voting precincts) because a decent percentage of the blocks and intersection locations fall on the border of geographies. Many of the geographies have boundaries which follow the middle of the street which is precisely where Block and Intersections are located. Thus it is not reasonable to put these blocks and intersection in one geography over another.

What is the Address / SSL Cross Reference Table?

The Cross Reference table (MARDBA.SSL_XREF_MAR) stores the relationship between an address and an SSL (property identifier). The relationship between these two items is a many to many. It stores over 200,000 records. One SSL (Square, Suffix, Lot) can have multiple addresses located on it. This often includes garden style apartment complexes as well as corner addresses with separate addresses facing each adjacent street. One address can also sit upon multiple properties. One single family residence can sit upon multiple lots. The address records only contain one 'base' SSL (usually comes from OwnerPly). The cross reference table contains the many to many relationship between Address ID and SSL. Some addresses do not have an associated SSL (such as metro entrances or many addresses on Federal property).

How is the Address / SSL Cross Reference Table maintained?

The Address / SSL Cross Reference Table is maintained by an automated process that is run each weekend. The table is completely repopulated each and every weekend. The table is created based on the following sources:

- Vector Property Map (VPM)
- Address Records
- Condo Relate
- Residential Units
- OwnerPts
- Building Footprints

What is the Residential Unit Table?

The residential unit table contains unit values and other related information regarding residential units. There are about 255,000 residential units (a secondary address). Each residential unit is associated with an address from the address table (via the ADDRESS_ID field). Example unit values include '101', '201', 'A', '910', '1', '6' and 'A2.' This data includes both rental and condo units which is noted in the 'UNIT_TYPE' field. For condo units the condo's SSL values and condo book and page number is also stored.

What are the remaining weaknesses in the Residential Unit Table?

- Multi unit row houses
- New buildings
- Units where there are multiple ways to refer to the same unit (B1 vs B01)
- Special use residential facilities (University Dorms, Group Homes, Retirement, Nursing Home and Military Barracks)

What are some of the challenges while creating the Residential Unit Table?

The biggest challenge is just dealing with acquiring the huge quantity of active residential units which is over 250,000. The amount of change on annual basis is estimated to be between 4,000 to 10,000 records.

What is the Street Name Alias Table?

The Street Name Alias table contains a list of abbreviations, former names and misspellings for streets names. There are about a thousand records in this table. Examples include: 'MLK' for 'Martin Luther King JR' and 'Conn' for 'Connecticut' The street name alias table is utilized when searching the address table. It assists in transforming non standardized addresses into standardized address. It works as a sort of find & replace. There are over 1,000 records in the Street Name Alias Table.