

Cincinnati Area Geographic Information System Consortium (CAGIS)

Digital Street Name and Address Standard

Created August 12, 1995

Revised October 4, 2010

Revised December 20, 2011

Origin

In early 1995 various participants of the Cincinnati Area Geographic Information System Consortium (CAGIS) which included representatives from the City of Cincinnati, Hamilton County, Cincinnati Water Works, Metropolitan Sewer District, and the Hamilton County Communications Center (911) formed a committee to develop a standard for digital representation of street names and addresses for all CAGIS databases. This Document is the result of the efforts of the CAGIS Addressing Committee and has been adopted as a standard for all CAGIS records.

Purpose

The CAGIS Digital Address Standard was designed with the purpose of enhancing the potential for data sharing and Digital records integration among CAGIS participants. It is also a key element that allows the many legacy record systems to be integrated with CAGIS enterprise data, opening opportunities for new applications using the powerful capabilities of GIS technology. The Digital Address Standard is incorporated into all standard CAGIS data schemas where applicable. Digital master indexes of street names, addressing and other relevant geocodes created for the use of CAGIS participants will employ the standard and is now being maintained in the operations workflows linked with the mandated authorities for street name and address assignments (Cincinnati Public Works and Hamilton County Regional Planning). Geocode validation software tools and GIS files that employ the standards have also been developed that should make it easier for agencies to implement the Standard. The desktop user can use the latest CAGIS GEN7 ArcView project to deploy these tools. The same tools should also help to reduce data entry error and provide one means of improving enterprise data quality. Record systems that incorporate the Standard into their data design will not only have improved opportunity for integration with CAGIS data, but will also have improved opportunity for integrating between record systems that have been designed in compliance with the standard. Compliance with a multi-participant data standard has obvious benefits such as minimizing software development costs and the potential for making data more usable for more users. For these reasons, it is recommended that the Digital Address Standard be incorporated in all new data designs that are developed by CAGIS participants.

It is recognized that many participants may have significant capital investments in data design and software technologies that support current applications and systems. Over time, these legacy systems have resulted in multiple, nonconforming standards that cannot be easily converted without great cost. Further, while the vision of a shared standard is the preferred vision of the future, it is recognized that all agencies may not justify the conversion expense or effort with the same quickness as others. Users should note that CAGIS has the capability to translate legacy records to the new standard, however because legacy addresses are often ambiguous, perfect translations are rare. CAGIS can standardize addresses and create reports

on those addresses that are not matched with records in the **STRMASTR** and **ADDMATR** tables (comprehensive listings of valid street names and addresses). It is recommended that when legacy systems are retired for newer designs, that the Digital Address Standard be incorporated into those designs by agencies desiring more complete records integration or that desire access to the integrated software solutions that will be available through CAGIS.

Coordination with the FGDC National Address Standard

In November, 2010 the FGDC release a National Address Data Standard. The FGDC National Address Standard is intended as a data exchange standard, however it is being adopted by many agencies as a data standard as well. The CAGIS Address standard is well established and shares many of the same components and content standard, but they may have different associated data element names. The CAGIS standards include the FGDC terminology that will enable CAGIS data to be provided with various exchange mechanism. In addition, the CAGIS implementation of an address standard includes a real-time view (ADDRESSES_FGDC) that provides a means of a two way conversion between standards.

CAGIS Geographic Integration Framework

CAGIS has employed a conceptual data model that is referred to as the Geographic Integration Framework to provide a foundation for information and application integration. At the core of this data model are the data design elements for address management that implement the standards encompassed in this document.

Address Components

The Digital Address Standard separates elements of an address into major class and subclass components. Separating an address into components has proved practical for establishing the rules for defining data fields, parsing, semantics, and other conventions that are based in the common every day use logic and experience that enable most people to intuitively and correctly interpret location from an address. The Address Standards Committee attempted to create a standard with as few rules as possible while at the same time attempting to develop one that had comprehensive applicability to the range of addresses encountered in record systems of the various agencies within the City and County.

For the purposes of the Digital Address Standard, Address information captured in Digital form can be placed in the following three major classes:

- 1) House and street location components (House number, street name, unit, building, etc.)
- 2) Place name components (City, County, State, Zip code, etc.)
- 3) Integration Components (Street Name ID, Address Record ID, City Permits ID, County Permits ID, Street Segment ID, ParcelId, Group Parcel ID)

House and Street Components

The house and street name components of an address are the most critical and most used elements of address. These elements identify location relative to Rights-Of-Way, streets, and pavement and also resolve location to the building and within buildings. They are the primary means for relating specific locations associated with service delivery, citizens and customers.

The Address Standard identifies the following sub-components,

- House number sub-components
 - House number
 - House number suffix
- Street name sub-components
 - Street name prefix/Pre-direction (N, S, E, W,)
 - Street Name
 - Street name suffix/Street type (Road, Place, Street, Court, Drive, etc.)
- Building and unit sub-components
 - Building designator ("A", "1", etc.)
 - Unit designation value ("A", "1-A", "1001", "#2", etc.)

Place Name Components

Place name components are address modifiers that distinguish between local addressing systems related to jurisdiction or mail delivery zones. Place name modifiers distinguish between local systems duplicate house number and street name systems. For the CAGIS Standard, the key place name sub-components are defined as follows,

- City/Township/Jurisdiction
- Jurisdiction type
- County
- State
- Postcode/Zipcode
- Postcode suffix/Zip+4
- Building/Place Names

Integration Components

The CAGIS Geographic Integration Framework design makes provision for unique identifiers that are used to track and identify important address components. The Identifiers simplify query and maintenance operations in relational databases, enhance integration with GIS's, and make it easier to create integrating cross indexes. There is also an identifier for unique combinations of all street name components (pre-directional, street name, and street suffix combinations, referenced by the component name, **STRNAMID**. Unique identifiers for each unique address instance are constructed for multiple validation type. A parcel based address record ID referenced by the component name is called **ADDRECID**. The ID that insures single instances within a City, Village or Township is called **ADDRESSID**. The Unique Identifier for a street segment that has the attributes of address range, street name aliases, nodes and intersections is called **STRSEGID**. Segment endpoints are referenced as nodes with **NODEID** and are grouped into logical street intersections referenced by **INTERXID** when they fall within 25 square feet of each other. One of the most important identifiers for linking files, organizing data and for integrating other address information is the **PARCELID** which is an identifier that is composed by concatenating the Auditor's BOOK, PAGE and PARCEL numbers. The **GRPPCLID** is an identifier that is used to identify linked CAGIS parcel polygons that have had their corresponding property records consolidated for billing purposes in the Auditor's database. In addition, the City and County have deployed systems for managing the permitting processes. These systems track changes to the property and infrastructure inventory. Addresses are automatically maintained in these databases from GIS applications. Integration between records uses a PARCELID and the **CITYPERMID** and the **CNTYPERMID** unique address ID's in the Permits Plus databases.

- Unique Parcel Record ID - PARCELID
- Identifier Linking Consolidated Parcels - GRPPCLID
- Unique street name ID - STRNAMID
- Unique address record ID - ADDRECID (parcel based)
- Unique address ID – ADDRESSID (CITY based)
- Street segment record ID based on concatenation of NODEIDs - STRSEGID
- Unique street segment sequenced segment Id – FEATUREID (Street Centerline Table)
- Unique node record ID - NODEID
- Unique street intersection record ID - INTERXID
- Unique Building record ID - BLDGID
- Unique City Permit Address ID - CITYPERMID
- Unique County Permit Address ID - CNTYPERMID

The rules for creating these ID's are found in the CAGIS Geographic Integration Framework Documentation. These ID's are used for tracking maintenance, validation, rapid integration, translation, and record matching.

ADDRESS STANDARDS - FIELD SIZE AND DATA TYPE DEFINITIONS

ADDRESS MASTER TABLE	Field Name	Method Associated with Input	Package/Procedure/Function Populating Value	Additional Notes	Data Type	FGDC Name
Address Elements (simple)						
Street Number	HNUM	User Selected - Either Orphan or Uses StreetCL Address Range		Street Number of Address	VARCHAR2(6)	Address Number
Street Number Suffix	HNUMSFX	User Selected - Either STRMASTR if Orphan or StreetCL		Probably Less than 1-200 of these 1/2's, and a few A, B, C's where these are not unit designations	VARCHAR2(3)	Address Number Suffix
Direction	CAGDIR	User Selected - Either STRMASTR if Orphan or StreetCL		Street Direction of Address	VARCHAR2(1)	Street Name Pre Directional
Street Name	CAGSTRNAME	User Selected - Either STRMASTR if Orphan or StreetCL		Street Root Name of Address	VARCHAR2(30)	Street Name
Street Name Type	CAGSFX	User Selected from Domain - Either STRMASTR if Orphan or StreetCL (New FieldName will be CAGSTRTYPE)		Street suffix/type of Address	VARCHAR2(4)	Street Name Post Type
Address Elements (Complex)						

Full Address	ADDRESS	Calculated - Oracle Trigger	GMO.concat(hn, sd, sn, st)	Full Address (Modified with HNUMSFX if Available)	VARCHAR2(45)	Complete Address
Full Address with Jurisdiction	ADDRWCITY	Calculated - Oracle Trigger	GMO.MAKEADDRWCITY	Full Address with Jurisdiction Abbreviation (Modified with HNUMSFX if Available)	VARCHAR2(50)	
Full Mailing Address	ADDRMAIL	Calculated - Oracle Trigger	GMO.concat(ADDRWCITY, zipcode)	Full Mailing Address with Jurisdiction Abbreviation and Zipcode and ZipPlus4 (Modified with HNUMSFX if Available)	VARCHAR2(45)	Complete Mailing Address
Address Matching Key	CMATCH	Calculated - Oracle Trigger	GMO.MAKECMATCH(am_rec.ADDRWCITY)	Unique Address Match Field of ADDRWCITY with all punctuation and white space removed		
Street Name ID	STRNAMID	Autinput - Oracle Trigger	GMO.GETSTRNAMID	From StrMastr (Street Name Master Table)	VARCHAR2(8)	
Address Class	ADDRTYPE	User Selection			VARCHAR2(3)	
Address Attributes						
Global_ID	ADDR_GUID (Now)	Autogenerated 32 Char Unique System Value on Insert	ADDR_GUID := sys_guid;	Auto Generated	VARCHAR(32)	
Address Scheme Name	ADRSCHMNAM	Calculated - Oracle Trigger		FGDC Name - for Data Exchange	VARCHAR(2)	Address Scheme Name
Last User	ADDRUSER	Autogenerated from Login	cagutil.db_user		VARCHAR2(40)	
Last User Phone	USRPHONE	Autogenerated from Login			VARCHAR2(11)	
Feature Notes	FNOTESFLG	Autogenerated when Feature Notes are Added		Flag Indicates one or More Documents or Notes are Stored for this Address Feature. Unlimited and Access Controlled by Creator of Notes.	VARCHAR(1)	
Date Record Created	DATE_CRE	Autogenerated on Insert		Date record added	DATE	Address Date Started
Date Record Last Modified	DATE_MOD	Autogenerated on Update		Data record last modified	DATE	
Date Record Marked for Delete	DATE_DEL	Autogenerated on Mark for Delete		Date record marked for Delete; Removed	DATE	Address Date End

				Deleted from Public Use (Still has instances in Permits Plus Assigned to Permit) but Available for Geocoding		
Date Address Assignment Approved	DATE_APRV	User Selected		Flag is Set when Units are Associated with the Address by Assignment or Inheritance	DATE	
Geometry Update Date	GEOCHGDATE	Autogenerated on Insert/Update/Delete		Used to Identify Geometry Changed Date	DATE	
Geometry Update Flag	GEOCHGTYPE	Autogenerated on Insert/Update/Delete		"N" = New Address, "U" = Updated Address XY, "D" = Address Deleted	VARCHAR(1)	
Status - life cycle	STATUS	Autogenerated in Insert, Manual Override, Scheduled Job w Spatial Query		Status of Address	VARCHAR2(10)	Address Life Cycle Status
Multi Unit Flag	MULTIUNIT	Autogenerated on Insert/Update or Manual Override		Flag = "Y" Indicating Address is associated Multiple Structure Units	VARCHAR(1)	
Multi Building Flag	MULTIBLD	Autogenerated or Manual Override		Flag = "Y" Indicating Address is associated with multiple buildings		
Orphan Flag	Orphan	Autogenerated or Manual Override		N = New Orphan, Pending Street Centerline Creation - Default When Creating H = Historic Orphan - Automatic When Segment is Historic V = Verified Orphan - Manual Override	VARCHAR(1)	Address Anomaly Status
Address Geometry						
X_coord	X_COORD	Auto Created with UI		X State Plane Coordinate of Address Point Instance	NUMBER(20,5)	Address X Coordinate
Y_coord	Y_COORD	Auto Created with UI		Y State Plane Coordinate of Address Point Instance	NUMBER(20,5)	Address Y Coordinate
Latitude	LATITUDE	Auto Generated on Insert/Update	GEOMUTIL.PNT2 LATLONG(pnt, 'LAT')	Address Latitude	NUMBER(20,5)	Address Latitude

Longitude	LONGITUDE	Auto Generated on Insert/Update	GEOMUTIL.PNT2 LATLONG(pnt, 'LON')	Address Latitude	NUMBER(20,5)	Address Longitude
USNG	USNGCODE	Auto Generated on Insert/Update	GEOMUTIL.PNT2 USNG(pnt, '1M')	Address United State National Grid Value	VARCHAR(12)	US National Grid Coordinate
Address Quality/Accuracy/Editing						
Address Source	SOURCE	User Selected or Auto Created		Address Source	VARCHAR2(20)	Address Direct Source
Owner Comments	O_COMMENTS	User Selected		Owner Address Comments - Now Restricted	VARCHAR2(254)	
Edit Action Flag	EDITACTION	User Selected		Flag for any Pending Edit Functions	VARCHAR2(4)	
Moved Flag	MOVEDFLAG	Auto Created by Job		Flag used by some legacy application such as CWW Banner		
Field Verification Flag	FIELDVER	User Selected		Date Address was Verified	DATE	
Record Check Flag	CHKFLG	User Selected		Old Record Verification Field	VARCHAR(1)	
Automatic Operations Comments	A_COMMENTS	Auto Created by Job		New Field - Automatic Operations Comments - Last Automatic Operation Performed	VARCHAR(40)	
Posted Address Flag	POSTED	User Selected		Y/N Flag Indicating if an Address is Visibly posted		
Address Authority						
Record Owner	REC_OWNER	Autogenerated from Login or User Selected - Spatially Verified		Agency Responsible for Address Assignment	VARCHAR(30)	
Address IDs						
Address/Parcel ID	ADDRECID	Autogenerated on Insert	GMO.MAKEADD RECID	Parcel based Address ID for Quick verification of Parcel/Address Associations - Legacy Integration ID	VARCHAR(18)	
Address/Jurisdiction ID	ADDRESSID	Autogenerated on Insert	GMO.MAKEADD RESSID	Address-Community based Address	VARCHAR(20)	Address Id

				ID Used to Guarantee Uniquess within Community and for Address Data Integration		
Address Street ID	SEGADRLIN K	Autogenerated on Insert	gmo.make_segadrlnk(HNUM, STRSEGFID)	Address-street segment Unique Identifier - Guarantees Unit Address/Street Segment ID - Used for Street Based Integration	VARCHAR(13)	
Address Explicit Spatial Relationships						
Building	BLDID	Spatial Query by Default or Manual Link	CAGQRYS.GET_BLDID(pnt)	Legacy Building or Condo Flag - Populated only for Legacy Applications	VARCHAR(12)	
Condominium	CONDOFLG	Spatial Query		Will be Set = 'C' if Associated with Condominium Units, 'OFFICE' If Condominium Office, 'ASSOC' if Common Association Structure	VARCHAR(1)	
Jurisdiction Abbreviation	JURISABBR V	Spatial Query	CAGQRYS.GETJURISREC(pnt)	Jurisdiction Abbreviation	VARCHAR(12)	
Jurisdiction Full Spelling	JURISFULL	Autogenerated from trigger using Jurisabbrv	CAGQRYS.GETJURISREC(pnt)	Jurisdiction Full Spelling	VARCHAR(30)	Municipal Jurisdiction
Jurisdiction Permits Plus	JURISPPLUS	Autogenerated from trigger using Jurisabbrv	CAGQRYS.GETJURISREC(pnt)	Jurisdiction Permits Plus Jurisdiction Abbreviation	VARCHAR(12)	
Jurisdiction Code	CITYCODE	Autogenerated from trigger using Jurisabbrv	CAGQRYS.GETJURISREC(pnt)	Unique City/Township Code based on Auditor Book in County - Sequenced for OHC	VARCHAR2(4)	
Zip Code	ZIPCODE	Spatial Query - could be USPS	CAGQRYS.ZIP_W_PNT(pnt)	Zipcode	VARCHAR2(5)	
Zip Plus4	ZIPPLUS	Spatial Query - could be USPS		ZipcodePlus	VARCHAR2(4)	
County	COUNTYCODE	Spatial Query	CAGQRYS.GETJURISREC(pnt)	Three Character County Code	VARCHAR(3)	County Jurisdiction
State	STATE	Spatial Query	CAGQRYS.GETJURISREC(pnt)	Two Character State Code	VARCHAR(2)	State Jurisdiction
Parcel	PARCELID	Spatial Query	PROPQRYS.GETPROPID(pnt, 'P')	Parcel ID at address Point or Condomium Parcel ID	VARCHAR(12)	

Group Parcel	GRPPCLID	Spatial Query	PROPQRYS.GETP ROPID(pnt, 'G')	Group Parcel ID at Address Point	VARCHAR(12)	
Lot	LOT	User Assigned		Lot Assignment - Usually Assigned in Improvement Plan Process	VARCHAR(3)	
Street Segment ID	STRSEGID	Spatial Query	STRQRYS.GETST RSEGID(am_rec.S TRSEGFID)	Street Segment ID Constructed from Low/High Street Segment Nodes	VARCHAR(18)	
Street Segment Feature ID	STRSEGFID	Spatial Query	STRQRYS.GETN EARESTSTRSEGI DWPOINT(x, y, hn, v_strlabel)	Street Centerline Feature ID	VARCHAR(8)	
Street Segment Geocode X	SEGGEOCO DX	Spatial Query	geomutil.Getx(strq rys.getstrseggeoc e_pnt(ADDRWCIT Y))	X Coordinate on Street Segment Where Address Would Geocode Using Range Interpolation	NUMBER(20,5)	
Street Segment Geocode Y	SEGGEOCO DY	Spatial Query	geomutil.Gety(strq rys.getstrseggeoc e_pnt(ADDRWCIT Y))	Y Coordinate on Street Segment Where Address Would Geocode Using Range Interpolation	NUMBER(20,5)	
Street Segment Tangent X	X_SEG TAN	Spatial Query	geomutil.getx(GM O.Get_SegTan(pnt, STRSEGFID))	X Coordinate on Nearest Point on Street Segment Centerline	NUMBER(20,5)	
Street Segment Tangent Y	Y_SEG TAN	Spatial Query	geomutil.gety(GM O.Get_SegTan(pnt, STRSEGFID))	Y Coordinate on Nearest Point on Street Segment Centerline	NUMBER(20,5)	
Tangent Curb Point X	TANCURB_X	Spatial Query	geomutil.getx(adrq rys.getaddresspave edgepnt(x, y, x_seg tan, y_seg tan))	X Coordinate of the x tangent point coordinate on edge of pavement		
Tangent Curb Point Y	TANCURB_Y	Spatial Query	geomutil.gety(adrq rys.getaddresspave edgepnt(x, y, x_seg tan, y_seg tan))	Y Coordinate of the x tangent point coordinate on edge of pavement		
Side of Street	SIDEOFSTR	Spatial Query	substr(caglr.sidsid e(strqrys.getstrseg ssh(am_rec.STRS EGFID), pnt),1,1)	L or R Indicator - Showing Which Side of Street Segment Address Falls	VARCHAR(1)	
Address Parity	PARITY	Spatial Query		Flag indicating whether Address Follows Sequenced Assignment on Street	VARCHAR(1)	Address Number Parity
Road Network Asset Link	TANASSETI D	Spatial Query	roadpavqrys.getpav polyid_nn_w_pnt(GMO.Get_SegTan(pnt, am_rec.STRSEGF ID))	Pavement Asset Polygon Associated with Address Tangent XY	VARCHAR(24)	
Nearest Cross Street	NEARXST	Spatial Query	strqrys.getsegxstr_ w_pnt(GMO.Get_S egTan(pnt, am_rec.STRSEGF ID), STRSEGFID)	Nearest Cross Street of Address	VARCHAR(50)	

City Permits Plus ID	CITYPERMID	Autogenerated from trigger using Jurisabbrv	PPLUSQRYS.get_address_site_element_key(am_rec.ADRWCITY, 'CITY')	City Permits Plus Address ID	VARCHAR(10)	
County Permits Plus ID	CITYPERMID	Autogenerated from trigger using Jurisabbrv	PPLUSQRYS.get_address_site_element_key(am_rec.ADRWCITY, 'COUNTY')	County Permits Plus Address ID	VARCHAR(10)	
Building Place Name	BLDPLACE	Spatial Query or Manual Override	propqrys.getpropatts(pnt)	Primary Place or Condo Name Associated with Address	VARCHAR(50)	
Building Place Name 2	BLDPLACE2	Spatial Query or Manual Override	propqrys.getpropatts(pnt)	Secondary Place, Place Alias or Condo Phase Associated with Address	VARCHAR(50)	
Old Address ID	OLDAID	Auto Populated When Address Jurisdiction is Changed		Previous Address ID	VARCHAR(20)	
Old Address Parcel ID	OLDPID	Auto Populated When Address Parcel is Changed		Previous Parcel ID	VARCHAR(12)	

KEY DATA ELEMENT COMPOSITIONS

STRNAMID – Purpose: Primary Key for the Street Name Table (**STRMASTR**)

Composition: <STRMASTR.NAME.LEFT(5)> + <Unique 2 digit sequence number> + <STRMASTR.PREFIX IF NOT NULL>

ADDR_GUID – Purpose: Unique Primary Key for Addresses

Older version of a unique instance key that is a 32 character system generated GUID

GLOBAL_ID – Purpose: Unique Primary Key for Addresses

New version of a unique instance key that is a 32 character system generated GUID that also satisfy uniqueness across Geodatabase Instances

ADDRESSID – Purpose: Identifier for Addresses that is Unique within a City/Township or Village

Composition: <MUNITWPS.CITY_CODE (4 CHAR)> + <STRMASTR.STRNAMID (RIGHT '0' PADDED)> + <ADDMASTR.HNUM (LEFT '0' PADDED)> + <ADDMASTR.HNUMSFX (RIGHT '0' PADDED)>

ADDRECID - Composed of the concatenation of a PARCELID + a left 0 filled HNUM + the first character of the street name.

NODEID - Composed of the USNG (United States National Grid ID) of the Node

STRSEGID - Composed of the concatenation of the low X **NODEID** with the high X **NODEID**

STRSEGFID – Unique Sequence ID for street centerlines

INTERXID - Composed the same as the node id.

LEGAL DATA VALUES FOR THE ADDRESS COMPONENT FIELDS

HOUSE NUMBER

LEGAL DATA VALUES: The house number field will hold a numeric five (5) digit house numbers in a character field and contain only integer values. Unit related data should be stored in the **Unit** field.

STREET NAME PREFIX/PRE-DIRECTION

LEGAL DATA VALUES: The **Street Name Prefix/Pre-Direction** field is used to store the single character representation of a street name directional prefix that is used to segment and distinguish street right-of-ways where there is potential for duplicate address ranges in different quadrants of an address grid. For example,

E 8th ST and **W** 8th ST, or

N Elm ST and **S** Elm ST.

REQUIRED ABBREVIATIONS/SPELLINGS

<u>FULL SPELLING</u>	<u>ABBREVIATION</u>
EAST	E
NORTH	N
SOUTH	S
WEST	W
No Direction	Blank (dbase formats) Null (Oracle)

STREET NAME

LEGAL DATA VALUES: The **Street Name** Field is used to store the root or main part of a street name. Prefix directionals are stored in the **Street Name Prefix/Pre-direction Field**.

Recurring values of a street name used traditionally used to classify the street's type or use is stored in the **Street Name Suffix/Street Type field**. The following illustrates how street names are parsed into the field components of a street name:

<u>DIRECTION/PREFIX</u>	<u>STREET NAME</u>	<u>STREET TYPE/SUFFIX</u>
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S	ELM	ST
N	ELM	ST
	VINE	ST
E	8TH	ST
E	COLUMBIA	PKWY
	BRITTANY WOODS	DR
	CROWN POINT	DR

NOTE: POST DIRECTIONAL/SUFFIX DIRECTIONS

The City of Cincinnati and Hamilton County do not employ post directionals in their street name designations. Post directionals are generally used by cities to distinguish between streets that have the same directional employed on parallel streets in the same quadrant. When they are encountered in record systems in this community it is usually because the data gathered has is refinancing the street name that is represented on some street signage within the County that places the street direction after the name. **These are not the official spellings and should be discouraged from use in Digital record systems.**

SPECIAL RULES GOVERNING USE OF DIRECTIONALS

In some instances directions are commonly considered among Hamilton County citizens to be part of the street name. The Digital Standard Will always abbreviate directional's and parses them to the prefix/direction field unless the following conditions occur.

- 1) A Street name could have the instance of having two directions preceding a street name component. In this instance the first directional will be abbreviated and placed into the prefix field, the second fully spelled. An example is:

W NORTH BEND RD

- 2) The direction is the street name. In this instance, the direction will not be abbreviated. An example is

EAST AV

These rules are designed to simplify decisions on parsing and abbreviating addresses for Digital file systems. CAGIS has created provisions for a special field in the STREETS database that enable instances of streets where directions are commonly considered as part of the street name (not a directional indicator) can be labeled with a special class of labels that will provide the common spellings for these streets on maps. Further, software will be provided that enables queries to use abbreviated or non-abbreviated spellings.

RULES FOR ABBREVIATIONS AND SPELLINGS OF STREET NAMES:

Required first word abbreviations (Note these are the **only abbreviations** allowed in the Street Name Field)

<u>FULL SPELLING</u>	<u>ABBREVIATION</u>
DOCTOR	DR
SAINT	ST

MOUNT	MT
MISTER	MR
INTERSTATE	I-
UNITED STATES	US
STATE ROUTE	SR
STATE ROAD	SR

RULES FOR REPRESENTING NUMBERED STREETS:

Numbered streets are always to be represented as numeric values. Examples of this are,

<u>STREET NAME</u>	<u>STANDARDS REPRESENTATION</u>
SIXTY SIXTH	66TH
SIXTY-SIXTH	66TH
FIRST	1ST
SECOND	2ND
TENTH	10TH

RULES FOR STREET NAMES WITH NUMBERS AS PART OF THE STREET NAME:

Some street names may have numbers as part of the street name, but are not considered what would intuitively be considered a 'Numbered Street'. In these Instances, the numbers are to be spelled out. Examples of this are,

<u>STREET NAME</u>	<u>LEGAL VALUE</u>
4 MILE ROAD	FOUR MILE ROAD
8 MILE ROAD	EIGHT MILE ROAD

RULES FOR SPECIAL CHARACTERS/PUNCTUATION IN STREET NAMES:

In general the only special characters that will be allowed in street names are Hyphens for Interstate Expressways. Examples are,

I-70

I-275

No other use of special characters for new street names is allowed.

RULES FOR HIGHWAY NAME SPELLINGS:

Highway names are encoded on representations of single line segments. The Name represents the US name designation for both travel directions of a Highway. Each direction is further aliased using street names are that include the highway designation and the highway segment direction of travel. For example,

<u>NAME</u>	<u>ALIAS</u>	<u>MEANING</u>
I-75	I-75 NB	Interstate 75 northbound
I-75	I-75 SB	Interstate 75 southbound

NB, SB, EB, WB are abbreviations for Northbound, Southbound, Eastbound, and Westbound respectively.

RULES FOR HIGHWAY MILE MARKERS

Highway mile markers in essence represent locations along an expressway/highway, similar to addresses. There are many forms for representing highway mile markers. Some of those below are,

I-275 NB mile marker 10/2
 I-275 NB mile post10/2
 I-275 NB EXWY mm 10.2
 I-275 NB mile marker 10-2

There are other representations. However, CAGIS encodes highway mile markers into a format that is compliant with the CAGIS address standard. The CAGIS standard converts the mile marker to an address by converting the delimiter to a '0'. Thus, 10/2 or 10.2 becomes 1002 and then is treated as a house number. The mile marker descriptor ('mile marker', 'mile post', 'mm' or other variation) is dropped. The TYPE/SUFFIX is always used. Thus,

I-275 NB mile marker 10/2
 Encodes to
 1002 I-275 NB EXWY

STREET NAME SUFFIX/STREET TYPE

LEGAL DATA VALUES **Street Name Suffix/Street Type field** is for those suffixes that are appended to street names that are traditionally used for street classification or defining general street type, such as street, road, avenue, boulevard, etc. The following list defines the **only** allowable street name suffix/street type values. The list also defines the legal range of suffix spellings and abbreviations.

<u>FULL SPELLING</u>	<u>LEGAL TYPE/SUFFIX VALUE</u>
AVENUE	AV

BOULEVARD	BLVD
CIRCLE	CIR
CRESCENT	CRSC
CREST	CRST
COURT	CT
DRIVE	DR
EXPRESSWAY	EXWY
HIGHWAY	HWY
LANE	LN
PARKWAY	PKWY
PLACE	PL
STREET	ST
TERRACE	TER
TRAIL	TRL
TRAILS	TRLS
COMMON	CMN
COMMONS	CMNS
POINTE	PTE
POINT	PT
ALLEY	AL
SQUARE	SQ
ROAD	RD
WAY	WY
TRACE	TRCE
PIKE	PIKE
VIADUCT	VIA
BYPASS	BYPS
CONNECTION	CONN
ENTRANCE	ENT
JUNCTION	JCT

CLOSE	CLSE
ACCESS	ACCS
CHASE	CHSE
ROW	ROW
COVE	COVE
PASS	PASS
WALK	WALK
VIEW	VIEW
RAMP	RAMP
OVERPASS	OVPS
CROSSING	XING

BUILDING DESIGNATOR

LEGAL DATA VALUES: Building references are important for designating various buildings in industrial parks, multi-building campuses, shopping centers, etc. While building identifiers are important in records for mailings, service records, permit records and etc., building identifiers are usually assigned by residents and owners. They are not currently regulated by any local government agency. To enable use of a building identifier for record systems where it is applicable (i.e., for mailings), a field been defined for storing building designators. Expected values are such values as:

BUILDING 1
BLDG A

Note: Building names are considered place aliases. Provisions for storing place aliases are designed into the CAGIS Geographic Integration Framework.

BUILDING ID

LEGAL DATA VALUES: The Building ID is a unique ID originated from a USNG 1m coordinate of the centroid of a building. Once the ID is assigned it does not change regardless if the centroid point changes because of boundary changes to the building footprint, unless the centroid falls outside of the building footprint.

UNIT DESIGNATION VALUE

LEGAL DATA VALUES: Unit information is frequently encountered on service location addresses, in addresses used in permitting, on those found in conjunction with customer service records and on home billing addresses. Unit values are difficult to since unit designations are owner or resident determined, and generally not subject to review and approval in any known workflow in the public sector. However, it is a frequently used qualifier of location useful for a number applications. Unit designations such as **REAR**, **UPPER**, and **LOWER** are allowed as values in the **Unit** Field. Since these values will be resident designated, all values cannot be predicted. However, some of the expected values are,

"A-Z"

"A1-Z(n)"

1-(n)

REAR, UPPER, LOWER

#1-#(n)

CITY/TOWNSHIP/JURISDICTION

LEGAL DATA VALUES: This field is for the full spelling of any jurisdiction in Hamilton County.

JURISDICTION TYPE

LEGAL DATA VALUES: The **Jurisdiction Type** field contains values that designate the jurisdiction type of the value stored in the **City/Township/ Jurisdiction** field. The value designates type as City, unincorporated areas, and Township values. Legal data values are,

FULL SPELLING

LEGAL VALUE ABBREVIATION

CITY

CTY

VILLAGE

VIL

TOWNSHIP

TWP

COUNTY

LEGAL DATA VALUES: Most of the addresses used by agencies in the CAGIS consortium are in Hamilton County. However, the **County Field** can contain any County designation.

STATE

LEGAL DATA VALUES: The **State** Field is to store values relating to state names. The US Post Office Two (2) character abbreviations are the only legal values for this field.

POSTCODE/ZIPCODE

LEGAL DATA VALUES: The **Postcode/Zipcode** field is used to store the US Post Office assigned five (5) digit zip code.

POSTCODE SUFFIX/ZIP+4

LEGAL DATA VALUES: The **Postcode Suffix/Zip+ 4** field is used to store the US Post Office assigned four (4) digit extended zip+4 values.

ADDRESS TABLE DOMAINS AND DOMAIN VALUES

COLUMN_NAME	CODEVALUE	ANNOTATION	DESCRIPTION
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ADDRTYPE	BLD	BUILDING/STRUCTURE ADDRESS	Automatically Assigned when Address is in Building/Structure Polygon
ADDRTYPE	CON	CONDO ADDRESS	Automatically Assigned when Address is in Condo Polygon, but Not in a Building/Structure Polygon (See CondoCfg for Condo Linked Addresses) Manual Override for Situations where assigned to non-building infrastructure/Landmark feature such as a Tower, Monument, etc.
ADDRTYPE	INF	INFRASTRUCTURE FEATURE	Mile Markers
ADDRTYPE	MM	MILE MARKER ADDRESS	Mile Markers
ADDRTYPE	OHC	OUT OF COUNTY ADDRESS	Keep. Convert all with status = Registered
ADDRTYPE	PAR	DEFAULT VALUE IF ON PARCEL - PARCEL ADDRESS	Default type
ADDRTYPE	PRJ	TEMPORARY PROJECT/CONSTRUCTION	Was legacy type. Should be forced to fixed choice. Can be deleted/moved when temporary address no longer needed or is moved.
EDITACTION	NULL	DEFAULT VALUE	Field Used for Automatic Operations - Use is Reserved
CHKFLG	A	CONFIRMED ANOMALY	Set to Indicate Address is a Verified Anomaly
CHKFLG	F	SEND FOR FIELD VERIFICATION	Set to Send to Field for Verification
CHKFLG	I	INVESTIGATION NEEDED	Address Checked - Needs Further Investigation
CHKFLG	O	VERIFIED ORPHAN ADDRESS	Verified as Orphan Not Likely to have Streets Associated with it
CHKFLG	V	VERIFIED	Has been Field or Otherwise Verified
CHKFLG	NULL	DEFAULT VALUE	
CHKFLG	R	NEEDS ADDRESS RANGE VERIFICATION	Needs Address Range Verification
CHKFLG	S	MOVE TO SEQUENCE PROPERLY	NEEDS TO BE MOVED TO SEQUENCE CORRECTLY
CHKFLG	M	NEEDS TO BE MOVED	Address Need to be Moved
MOVEDFLAG	A	Auto Moved by Reconciliation Op	Address Moved in Reconciliation Operation

MOVEDFLAG	B	Moved to Building	Manually moved to building
MOVEDFLAG	M	Moved (other than to building)	Manually moved (but not to Building)
MOVEDFLAG	R	Moved - Special GCWW Op	Special GCWW Banner Operation Move
MOVEDFLAG	NULL	DEFAULT VALUE	
STATUS	ASSIGNED	OFFICIAL ASSIGNED ADDRESS	Official Assignment Designation
			Set when Address Removed from Public Use when Still Assigned to Permits. Still Geocodable.
STATUS	DELETED	DELETED ADDRESS	
STATUS	HISTORIC	HISTORIC ADDRESS	Set When Street Centerline Moved to Historic Layer.
			Automatically Set on Address Imports from OHC Sources or Manually Set
STATUS	REGISTERED	OHC-REGISTERED ADDRESS (IMPORTED FROM OHC SOURCE)	
			Manually Set - Address posted by Owner but is not an Official Assignment
STATUS	USING	NON-OFFICIAL POSTED ADDRESS	
			Interpolated Address Activated for Association with a GIS Feature Where Address needs to be maintained for Searches. Note: Must have always have an INF Addrtype
STATUS	ACTIVE_IA	NON-OFFICIAL ACTIVATED INTERPOLATED ADDRESS	
GEOCHGTYPE	N	NEW	New Address Added
GEOCHGTYPE	U	UPDATED	Address Moved
GEOCHGTYPE	D	DELETED	Address Deleted
			Reset to this After Provided as Update Indicator for Flyover/Updates
GEOCHGTYPE	Null	Default Value	
			Automatically Set When Associated with Unit Records in BldUnits table
MULITUNIT	Y	HAS UNIT RECORDS	
MULITUNIT	Null	Default Value	
			Indicates Address Associated with more than one building/structure
MULTIBLD	y		Automatically Set When Linked to Multiple Building in BldAdrLink Table
MULTIBLD	Null	Default Value	

CONDOFLG	S	Condo Structure Address	This would be used when base address is assigned to a Condominium Building. Changes to U when Actual Condo Parcels/Units are Linked
CONDOFLG	A	Condo Association Common Structure	Manually Set to Indicate Address Is Associated with Association Common Structure
CONDOFLG	U	Condo Unit	Automatically Set When Linked with Condo Units
CONDOFLG	Null	Default Value	
FNOTESFLG	Y	Feature Notes Attached	Automatically Set When a Feature note is Linked to an Address
FNOTESFLG	Null	Default Value	
ORPHANFLG	N	New Orphan - New Street Not Captured	Orphaned Address Pending Creation of a Street Centerline
ORPHANFLG	V	Verified Orphan	Orphan Address Verified
ORPHANFLG	H	Historic Orphan	Address Orphaned when Street Centerline Is Designated Historic (Note in some cases address ranges can be adjusted to make these non-orphaned addresses)
ORPHANFLG	P	Pedestrian Orphan	Pedestrian Walk Address
ORPHANFLG	?	Orphan Status Questioned	Orphan that Needs Investigation
SOURCE	ALIAS		Automatically Set on Imports of Records
SOURCE	CAGIS	CAGIS Created	Automatically Set on Imports of Records
SOURCE	CBHTE		Automatically Set on Imports of Records
SOURCE	CIPRM	Premise Address	Automatically Set on Imports of Records
SOURCE	CONDO		Automatically Set on Imports of Records
SOURCE	COPRM		Automatically Set on Imports of Records
SOURCE	CPW	CDTE Created/Validated	Automatically Set on Imports of Records
SOURCE	CWW	GCWW Supplied	Automatically Set on Imports of Records

SOURCE	CWW-OC	GCWW Supplied	Automatically Set on Imports of Records
SOURCE	CWW-OC-MASON	GCWW Supplied	Automatically Set on Imports of Records
SOURCE	HCBI		Automatically Set on Imports of Records
SOURCE	HCCC		Automatically Set on Imports of Records
SOURCE	HCRPC	HCRPC Created Address	Automatically Set on Imports of Records
SOURCE	LOVELAND	Loveland Supplied	Automatically Set on Imports of Records
SOURCE	MSD	MSD Supplied	Automatically Set on Imports of Records
SOURCE	PARCL	Parcel Address - Original Auditor Source	Automatically Set on Imports of Records
PARITY	A	Ascending - Normal	Follow Ascending Sequent with Street Segment Address Range (Default)
PARITY	D	One Side Descending Range	Follows Reverse Sequent - Usually when One Side of Address Range Reverses from Ascending Direction
PARITY	J	Sides Numbered by Different Jurisdictions	Sides of Street Under Different Jurisdiction Number Schemes
PARITY	M	Side O/E Mixed	Follows Ascending Sequence but E/O is Mixed
PARITY	N	No Discernible Sequence	No Discernible Sequence
PARITY	R	Both Sides Reversed -	Follows Reverse Sequent - Usually when One Side of Address Range Reverses from Ascending Direction
SIDEOFSTR	L	Left Side of Street Centerline	Address on Left Side of Street
SIDEOFSTR	R	Right Side of Street Centerline	Address on Right Side of Street
SIDEOFSTR	M	Middle (on street centerline) or Median	Can be automatically assigned or manually assigned. Indicator for Middle of street or median.

Address Domains: Supplemental Notes

Standards for Condo Addresses

Condominium Name Parsing Rules

In the Auditor's file, the Condominium name is stored free form in the three legal description field Lglds1, Lglds2 and Lglds3. These fields contain three or four components, the condo unit, percent owned, condominium name and the phase of construction. The condominium name and phase are unique for each polygon maintained to represent the common areas of a condominium. The parsing of the content of the fields is as follows;

<u>Field Lglds1</u> <u>Lgds3</u>	<u>Field Lglds2</u>	<u>Field</u>
UNIT 78 - 1.32 %CHESTNUT SE 10	STATION I	CONDOMINIUM PHA

Parses to:

<u>Field Unit</u> <u>Percentcom</u>	<u>Condoname</u>	<u>Secphase</u>
78 1.32%	CHESTNUT STATION CONDOMINIUM	PH 10

The spelling and abbreviation standards are noted below

Condoname field

- No Abbreviations
- All spellings in upper case
- Each Condo Name has Condominium as the last word
- All names within a complex must be consistently spelled
- Acronyms spelled without spaces (i.e. PC CONDOMINIUM)

Secphase Field

- All names within a complex phase must be consistently spelled
- (Number express in Arabic notation) No Roman Numerals

- **No (#s, number or no for number)**
- **No Periods with abbreviations**
- **Required Spellings/Abbreviation**
 - **PHASE - PH**
 - **ABATEMENT - ABTMT**
 - **AMENDMENT - AMDNT**
 - **SECTION - SEC**
 - **PART - PT**
 - **EAST, NORTH, SOUTH, WEST - (E, N, S, W)**
 - **BLOCK - BK**
 - **PART - PT**
 - **SUBDIVISION - SUB**
 - **VILLAGE - VIL**
 - **BUILDING – BLDG**
 - **PARCEL - PARCEL**

Unit Field

- **Word ‘Unit’ is eliminated as a prefix for all Units**
- **PKG is the designation for a Garage Unit**
- **No Hyphens (-)**
- **Any directions are to be abbreviated**
- **Any direction indicators (i.e., 104 W) are to have a space between unit number or letter designation and the direction**
- **House number is not to be included in the UNIT designation unless it is the unit designation. For Instance,**

- **For the Condo Unit with house number of 2614 and a UNIT of 207**

UNIT = 2614-207 (incorrect)

UNIT = 207 (correct)

- **For the Condo Unit with house number of 1915 and a UNIT of 1915 (usually a townhouse style condominium)**

UNIT = 1915 UNIT 1915 (incorrect)

UNIT = UNIT 2614 (correct)

- **A single space is used between the Prefix UNIT and the unit designator**
- **On units with mixed alphanumeric values, no spaces or hyphens should be used within the unit value. For instance:**
 - **UNIT 207B (correct)**
 - **UNIT 207 B (incorrect)**
 - **UNIT 207-B (incorrect)**
 - **UNIT BC 6A WEST (incorrect)**
 - **UNIT BC6A W (correct)**

Percentcom Field (Percent common owned)

- **All percent ownerships are represented as numeric percentages**
 - **6.25% (correct)**
 - **ONE-THIRD % (incorrect)**

ADDMASTR RULES FOR CONDOMINIUM ADDRESSES

Address Rules for Condo Parcels/Units

- **Condominium PARCELID is the parcel ID assigned by the Auditor to the Condo Unit**
- **Condominium GRPPCLID is the condominium complex/phase ID assigned by CAGIS to the phase polygon**
- **The BLDGPLACE field contains the value for the Condominium Complex Name**
- **The BLDID field contains a abbreviated version of the Section/Phase Identifier using the following abbreviation rules:**
 - **PHASE - PH**
 - **ABATEMENT - ABTMT**
 - **AMENDMENT - AMDNT**
 - **SECTION - SEC**
 - **PART - PT**
 - **EAST, NORTH, SOUTH, WEST - (E, N, S, W)**
 - **BLOCK - BK**
 - **PART - PT**
 - **SUBDIVISION - SUB**
 - **VILLAGE - VIL**

- **BUILDING – BLDG**
- **PARCEL - PARCEL**

- **The Unit field contains the unit designation stripped of the UNIT prefix**
- **ADDRTYPE field contains the value ‘CDO’ as condominium Identifier**

Address Rules for Condo Complex Offices

- **Condominium PARCELID is the Same as the GRPPCLID (Complex/Phase Polygon ID) assigned by the CAGIS to the Condo Unit, unless the office is in a UNIT with a Parcel ID assigned by the Auditor**
- **Condominium GRPPCLID is the condominium complex/phase ID assigned by CAGIS to the phase polygon**
- **The BLDGPLACE field contains the value for the Condominium Complex Name**
- **The BLDID field contains a abbreviated version of the Section/Phase Identifier using the following abbreviation rules:**

- **PHASE - PH**
- **ABATEMENT - ABTMT**
- **SECTION - SEC**
- **PART - PT**
- **EAST, NORTH, SOUTH, WEST - (E, N, S, W)**
- **BLOCK - BK**
- **PART - PT**
- **SUBDIVISION - SUB**
- **VILLAGE - VIL**
- **BUILDING – BLDG**
- **PARCEL - PARCEL**

- **The Unit field contains value CDOOFFICE**
- **ADDRTYPE field contains the value ‘CDO’ as condominium Identifier**

Address Rules for Common Condominium Structures (not parcel/units)

- **Condominium PARCELID is the Same as the GRPPCLID (Complex/Phase Polygon ID) assigned by the CAGIS to the Condo Unit, unless the office is in a UNIT with a Parcel ID assigned by the Auditor**
- **Condominium GRPPCLID is the condominium complex/phase ID assigned by CAGIS to the phase polygon**

- **The BLDGPLACE field contains the value for the Condominium Complex Name**
- **The BLDID field contains a abbreviated version of the Section/Phase Identifier using the following abbreviation rules:**
 - **PHASE - PH**
 - **ABATEMENT - ABTMT**
 - **SECTION - SEC**
 - **PART - PT**
 - **EAST, NORTH, SOUTH, WEST - (E, N, S, W)**
 - **BLOCK - BK**
 - **PART - PT**
 - **SUBDIVISION - SUB**
 - **VILLAGE - VIL**
 - **BUILDING – BLDG**
 - **PARCEL - PARCEL**

- **The Unit field contains value CDOSTRUCT**
- **ADDRTYPE field contains the value ‘CDO’ as condominium Identifier**