BAS Technical Guide
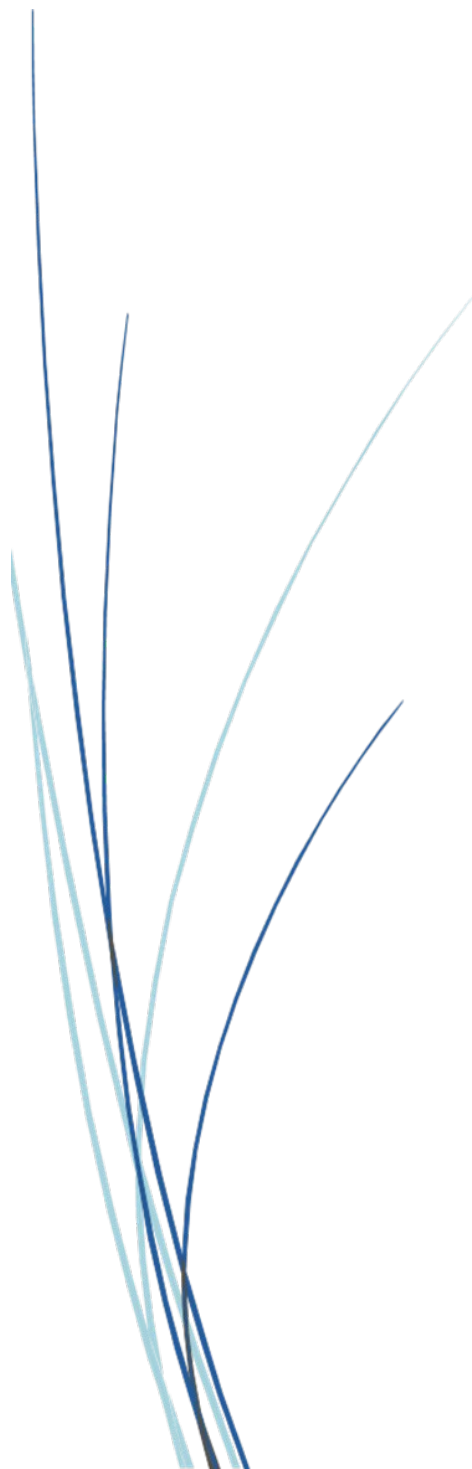
Supplemental Technical and Background Information for the Boundary and Annexation Survey

United States® **Census** Bureau

U.S. Census Bureau **GEOGRAPHY**

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INTRODUCTION

This How-to Guide is a supplemental resource that contains background information and technical details about U.S. Census Bureau geography, Boundary and Annexation Survey (BAS) submission information, change types, and shapefiles.

This information is applicable for all three BAS submission methods–the BAS Partnership Toolbox (ArcGIS Pro), the Geographic Update Partnership Software (GUPS) Web, and paper. For detailed instructions on creating a BAS submission using one of these three submission methods, refer to the corresponding How-to Guide located on the BAS website at <www.census.gov/programs-surveys/bas/information/respondent-guides.html>.

CHAPTER 1   CENSUS BUREAU SYSTEMS AND DATA INTEGRITY

The Census Bureau's Geography Division develops geographic applications and executes related activities in support of data collection and dissemination. For more than twenty years, the Census Bureau's Master Address File and Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) System has been a critical resource for supporting the various geographic partnership programs conducted by the Census Bureau.

The following section describes how the Census Bureau uses a topologically integrated system and how this differs from traditional geographic information system (GIS), which use separate layers of data.

1.1   Topological Relationships in the MAF/TIGER System

At the Census Bureau, topology is described as the spatial relationship between different levels of geography. The MAF/TIGER System is a geographic database in which the topological structures define the location, connection, and relationships of streets, rivers, railroads, and other features. These topological structures help define geographic areas for data tabulation.

Instead of having a separate layer for each feature class (roads, boundaries, etc.), all information in the MAF/TIGER System is stored in one layer or file. See **Figure 1** for a sample of topologically integrated data in the MAF/TIGER System.
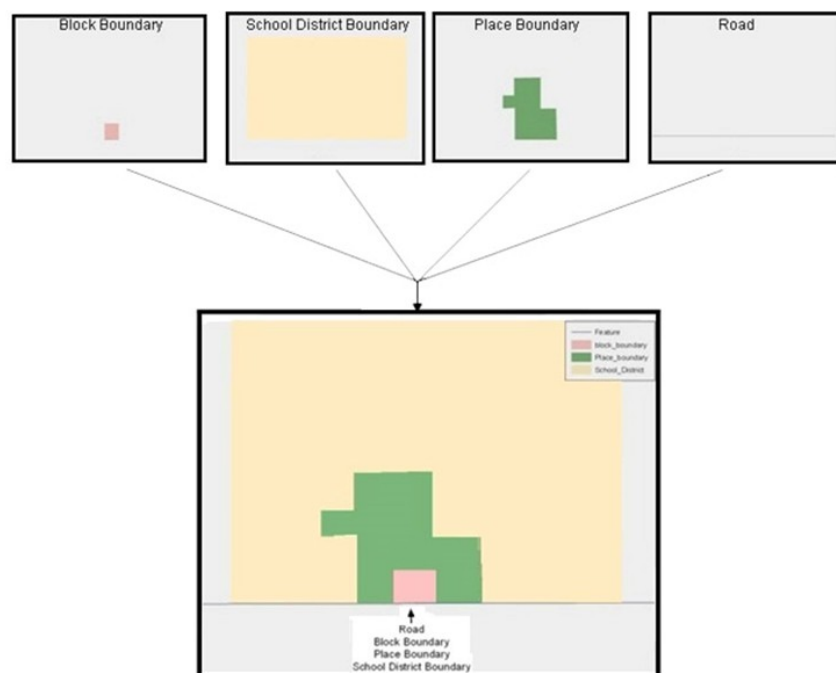
Figure 1: Topological Integration of Four Feature Classes

This example shows the topological integration of four different feature classes into one layer. One road feature represents not only a road, but also a block boundary, place boundary, and a school district boundary.

1.2   GIS and Spatial Accuracy

In a GIS, feature classes are often not topologically integrated; instead, they are separated into individual datasets. When these datasets are overlaid in a GIS, there may be boundary misalignments. These non-topologically integrated datasets could cause issues in the MAF/TIGER System. **Figure 2** shows how files that are not topologically integrated might appear in a GIS when overlaid.
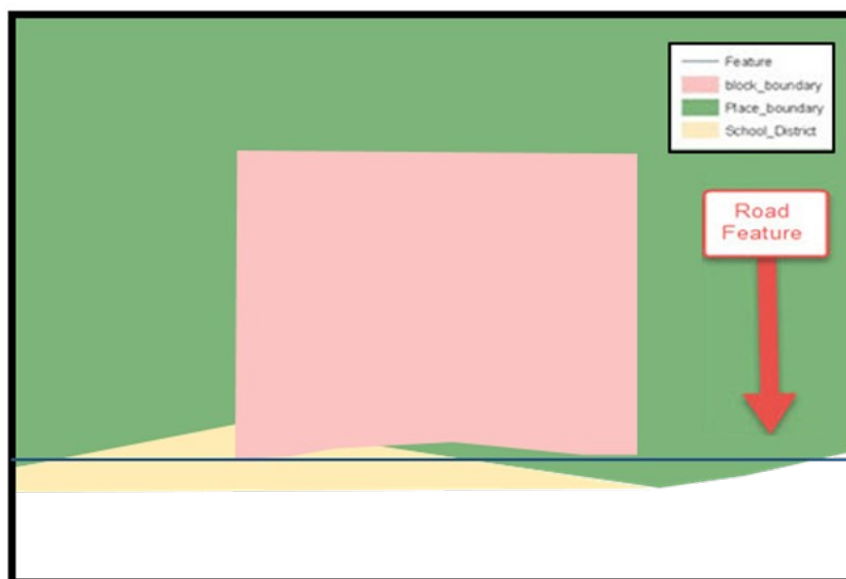
Figure 2: Overlay of Four Feature Classes

This example shows an overlay of four separate feature classes. Notice how
the topological relationship is compromised. The block, place, and school
district boundaries, which are supposed to follow the road feature, are no
longer aligned with the road in several locations.

The spatial differences between local GIS data and the Census Bureau's topologically integrated file are often very small (less than ten feet) and can create boundary-to-feature relationship issues for the Census Bureau. To avoid such issues, the Census Bureau will snap boundary changes to a MAF/TIGER System feature when it exists within 30 feet of that feature as shown in **Figure 3**. This ensures that housing and population are correctly tabulated to all geographies.
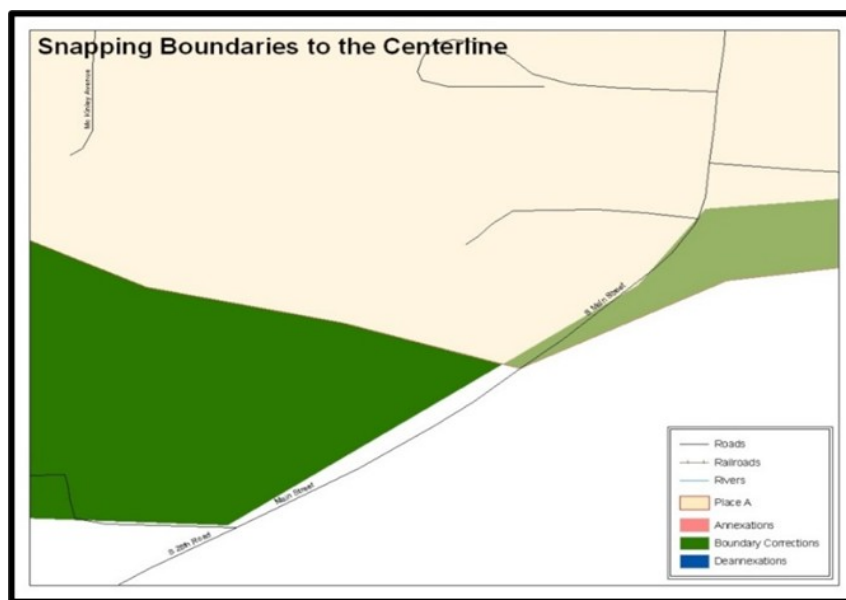
Figure 3: Snapping Boundaries to the Centerline

These boundary corrections are not snapped to existing linear features in the MAF/TIGER System. The Census Bureau will snap both boundary corrections to the centerlines to avoid population being assigned to incorrect governments.

1.3   Census Bureau Geocoding

Geocoding is how the Census Bureau codes the location of the housing and population within the boundaries of a geographic area. There are two primary methods of geocoding used by the Census Bureau, and both involved coding an address to a spatial polygon. One uses Global Positioning System (GPS) technology to create a MAF structure point (MSP), and the other uses address ranges for geocoding.

1.3.1   MSP Geocoding

To collect an MSP, a field worker stands in front of a house or living quarters and records the physical location with a GPS device (**Figure 4)**. Usually, the GPS point falls very close to the front door of the house. However, since GPS points are collected in the field, real-world obstacles like locked fences, poor satellite reception, or even aggressive dogs might prevent the field worker from gaining access to the front door. In these circumstances, the field worker may have to take the GPS coordinate from the sidewalk or side of the road.
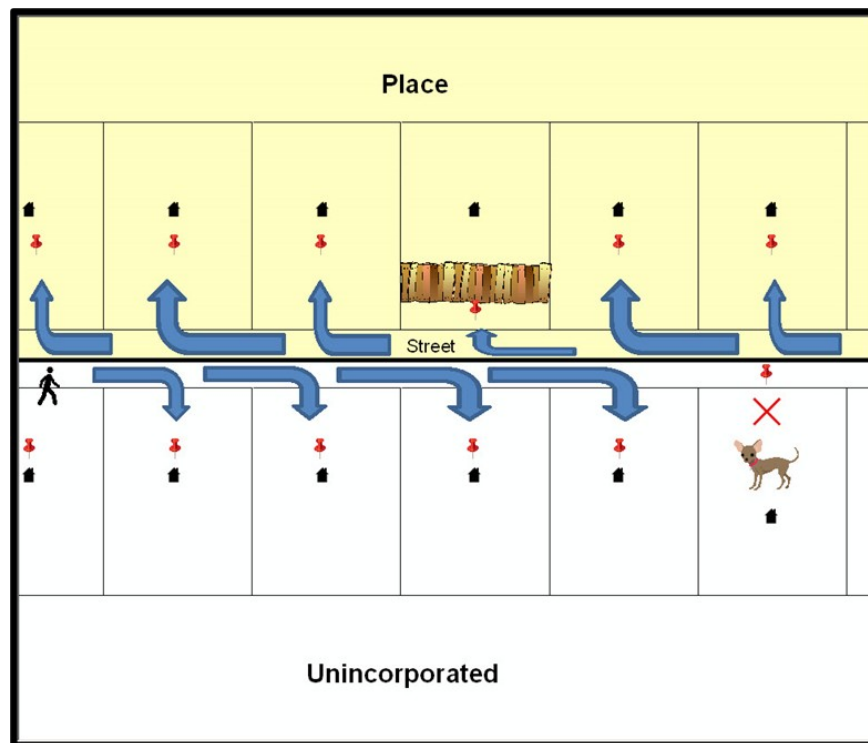
Figure 4: GPS Method of Geocoding

Notice that it is occasionally not possible for the field worker to go all the way to the front door due to unforeseen circumstances, like the fence or the dog shown above. Thus, the MSP (represented here by the red pins) can sometimes fall within the road or the road right-of-way.

1.3.2   Address Range Geocoding

When it is not possible to collect an MSP, the Census Bureau codes houses and living quarters according to the address range associated with the adjacent stretch of road (**Figure 5**). Address ranges describe a label given to a unique collection of addresses that fall along a road or path. Address ranges provide a way of locating homes and business based on their street address when no other location information is available. The Census Bureau conducts numerous operations and processes to build and maintain high quality address ranges.
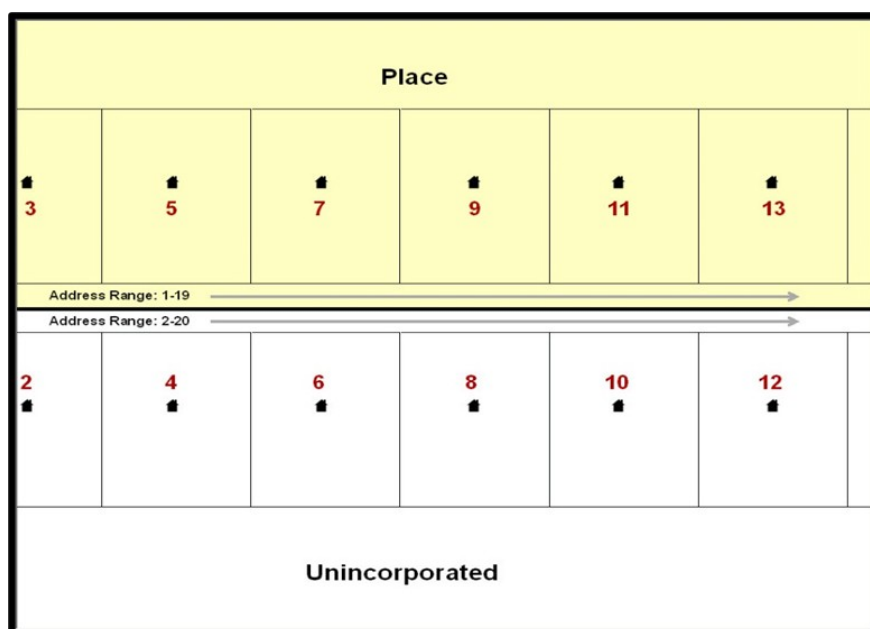
Figure 5: Address Range Geocoding

When it is not possible to collect an MSP, houses are geocoded according to their placement along a range of potential addresses along that road. Since the address has a relationship with the road, boundaries placed on front-lot-lines will lead to mis-geocoding unless an offset flag is used.

1.3.3   Geocoding, Boundaries, and BAS Submissions

While the two methods of geocoding differ greatly, both rely heavily on the integrated nature of the MAF/TIGER System. These geocoding methods are affected by the way streets and boundaries are represented in relation to one another. This interdependence between streets, boundaries, and geocoding means that Census Bureau representation of legal boundaries sometimes differs from other representations (e.g., in local or state GIS). This is important when adding geographic corridors and offsets that follow road right of ways (or the front-lot-lines of parcels). In both figures 4 and 5 above, delineating a boundary along the front-lot-line will increase the risk of incorrect geocoding. Using the road centerline as a boundary is the safer method.

If a road or road right-of-way is owned or maintained by a place but the adjacent housing is not, the centerline of the road should be used as the boundary. If local or state law requires the use of the front-lot-line boundary, the area between the road centerline and the front-lot-boundary should be designated as a corridor or an offset.

CHAPTER 2   BAS SUBMISSION INFORMATION

2.1   GOVIDs and Geographic Codes

The GOVID, previously called the BAS ID, is the code the Census Bureau uses to identify each government. All federally recognized American Indian areas (AIA), counties (and equivalent areas), incorporated places, consolidated cities, and minor civil divisions (MCDs) are assigned and identified by unique GOVIDs. Each GOVID can be found on the BAS Annual Response email sent at the start of each BAS year. A list of GOVIDs and other geographic codes can be found online at <www.census.gov/programs-surveys/bas/technical-documentation/code-lists.html>.

2.2   Submission File Naming Convention

The following tables provide the naming conventions for the various submission shapefiles. For all tables in this section, <GOVID> represents the participant's GOVID and <yy> represents the current year.

2.2.1   Change Polygon Shapefile

The following table provides change polygon shapefile naming conventions. The GOVID for the participant should be used when naming the shapefiles even if they are submitting changes for another level of geography.

Table 1: Change Polygon Shapefile Naming Conventions

Participant	Submitting Changes For	Shapefile Naming Convention
County	County	bas<yy>_<GOVID>_changes_county.shp
County	MCD	bas<yy>_<GOVID>_changes_cousub.shp
County	Incorporated Place	bas<yy>_<GOVID>_changes_incplace.shp
MCD	MCD	bas<yy>_<GOVID>_changes_cousub.shp
Incorporated Place	Incorporated Place	bas<yy>_<GOVID>_changes_incplace.shp
Consolidated City	Consolidated City	bas<yy>_<GOVID>_changes_concity.shp
County	Census Designated Places	bas<yy>_<GOVID>_changes_cdp.shp
AIA	AIA	bas<yy>_<GOVID>_changes_aiannh.shp
AIA	Tribal Subdivision	bas<yy>_<GOVID>_changes_tribalsub.shp
Hawaiian Home Lands	Hawaiian Home Lands	bas<yy>_<GOVID>_changes_hhl.shp

2.2.2 Whole Entity Polygon Shapefile

The following table provides the whole entity polygon shapefile naming conventions. The BAS ID for the participant should be used when naming the shapefiles even if they are submitting changes for another level of geography.

Table 2: Whole Entity Polygon Shapefile Naming Conventions

Participant	Submitting Changes For	Shapefile Naming Convention
County	County	bas<yy>_ <GOVID>_WholeEntity_county.shp
County	MCD	bas<yy>_<GOVID>_WholeEntity_cousub.shp
County	Incorporated Place	bas<yy>_<GOVID>_WholeEntity_incplace.shp
MCD	MCD	bas<yy>_<GOVID>_WholeEntity_cousub.shp
Incorporated Place	Incorporated Place	bas<yy>_<GOVID>_WholeEntity_incplace.shp
Consolidated City	Consolidated City	bas<yy>_<GOVID>_WholeEntity_concity.shp
AIA	AIA	bas<yy>_<GOVID>_WholeEntity_aiannh.shp
AIA	Tribal Subdivision	bas<yy>_<GOVID>_WholeEntity_tribalsub.shp
Hawaiian Home Lands	Hawaiian Home Lands	bas<yy>_<GOVID>_WholeEntity_hhl.shp

2.2.3 Street Change Shapefile

The following table provides the naming convention for the street feature change shapefile.

Table 3: Linear Feature Change Shapefile Naming Convention

Participant	Submitting Changes For	Shapefile Naming Convention
All Participants	Streets	bas<yy>_<GOVID>_changes_ln.shp

CHAPTER 3   SUBMISSION TYPES

The Census Bureau accepts submissions for changes to legal boundaries, census designated places (CDPs), and streets through BAS.

To update the MAF/TIGER System, participants must create a separate change polygon layer for each updated government type (county, MCD, place, CDP). Change polygons should be created in relation to the current MAF/TIGER System boundary.

The Census Bureau will snap any legal change or boundary correction to a MAF/TIGER System feature when it exists within 30 feet of that feature.

3.1   Legal Boundary Submissions

Legal boundary submissions include any updates to legal boundaries, including incorporated places, MCDs, counties, and tribal governments. Change types available for legal boundary submissions are legal boundary changes, boundary corrections, geographic corridors and offsets, and tribal subdivisions.

3.1.1   Legal Boundary Changes

Legal boundary changes are the result of legal actions. These include:

- Annexations or additions.
- Deannexations or deletions.
- New Incorporations.
- Disincorporations (and Inactive Entities).
- Name and/or Legal Description Changes.

Legal boundary change submissions from incorporated places, MCDs, and counties must provide the legal documentation number (e.g., law or ordinance number), effective date, and authorization type in the appropriate fields of the changes shapefile. For annexations and deannexations, the Census Bureau does not need the document itself to accept the changes if the required information is provided. AIA legal documentation (e.g., statute, federal court decision, trust deed) must accompany all AIA legal boundary changes.

New incorporation or disincorporation paperwork must be provided with those changes, and new incorporations must also include contact information for the Highest Elected Official (HEO) and BAS contact of the newly incorporated government. Similarly, changes to the name or legal description (e.g., town to city, etc.) must include the paperwork that enacted those changes. Inactive governments, or those without a functioning government that are still incorporated, only need confirmation that they hold that status.

3.1.2   Boundary Corrections

A boundary correction is the spatial adjustment of a boundary to correct an error in how the Census Bureau depicts an existing boundary. Boundary corrections should follow the general shape of the existing boundary. Legal documentation is not required when submitting a boundary correction to the Census Bureau.

The Census Bureau will accept and process boundary corrections:

- Where the existing boundary has been digitized incorrectly or appears in the incorrect location due to Census Bureau activities.
- Where the overall shape of the geographic area is maintained, and no boundary-to-feature relationships are dissolved.

The Census Bureau will not accept boundary corrections:

- Along county boundaries if the affected counties do not agree on the location of the boundary.
- Between adjacent incorporated places or adjacent MCDs if the affected places or MCDs do not agree on the location of the boundary, unless the changes are submitted by a county that is part of a Consolidated BAS (CBAS) agreement.
- That dissolve boundary-to-feature relationships (roads, rivers, railroads, etc.) if the difference is less than 30 feet.
- Greater than one square mile or not contiguous with the rest of the government boundary. These boundary corrections may be part of annexations that were never reported to the Census Bureau. If they are previously unreported legal changes, legal documentation is required.
- With a width of less than 30 feet at the widest point unless the change affects a housing unit.

3.1.3   Geographic Corridors

The Census Bureau geocodes addresses based on the street centerline. If the geocoding of these addresses would result in the assignment of population to the incorrect government, a geographic corridor should be created. A geographic corridor is an area that includes only the road (or other feature's) right-of-way and does not contain any structures addressed to either side of the street.

The left side of **Figure 6** shows a corridor (shown in color) created where the incorporated place annexed the right-of-way, but the housing units are not included in the incorporated place. Corridors are often used to connect two disconnected parts of a government when local law does not permit for discontinuous annexations. This type of corridor can be included in a BAS submission.

The right side of **Figure 6** shows that the right-of-way belongs in the unincorporated area, while the housing units are included in the incorporated place (shown in color). This is important for some cities because they are portraying that the city is not responsible for road maintenance. This is not relevant for Census Bureau tabulations and is not easy to depict in the MAF/TIGER System. This type of corridor should not be included in a BAS submission.
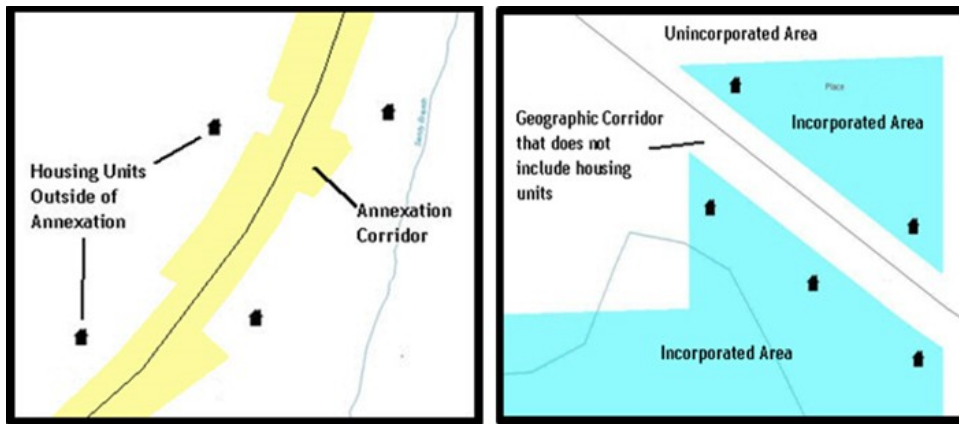
Figure 6: Geographic Corridor Creation

The left side of the image shows a corridor that has been created where an
incorporated place annexed the road right-of-way, but not the housing units
assigned to either side of the road. The right side of the image shows that
the geographic corridor should not be created and features should be
snapped to the street centerline.

3.1.4 Geographic Offsets

A geographic offset is an area claimed by a government that is only on one side of a road and
does not include structures addressed to that side of the road.

The Census Bureau is aware that many governments base their legal boundaries on cadastral
(parcel-based) right-of-way mapping. The Census Bureau bases its maps on spatial data that is
topologically integrated, which makes the maintenance of geographic offsets inefficient.
Delineating a government boundary on the road centerline helps establish more accurate
population counts. If a boundary is on the front-lot-line adjacent to a road on the map, the
Census Bureau prefers that the boundary be delineated on the road centerline already shown
on the map. If a boundary is on the rear or side lot line, then it should be depicted as such. The
left side of **Figure 7** depicts a cadastral boundary map and the right side shows how the
boundary should be reported to the Census Bureau.
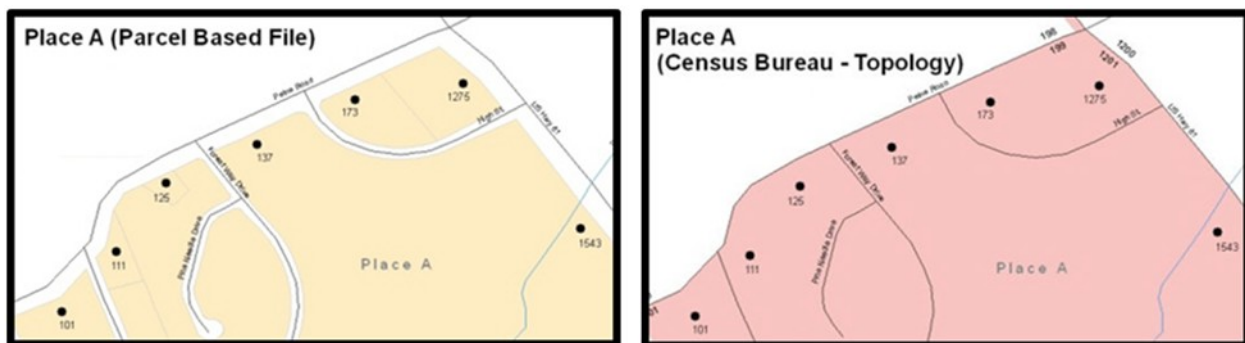
Figure 7: Cadastral Data and Census Bureau Topology

On the left in is an example of cadastral data. On the right is the same area
shown edited to conform to Census Bureau requirements.

3.1.5 Tribal Subdivisions

The Census Bureau considers any type of unit of self-government or administration in tribal areas as a tribal subdivision. A tribe may submit only one type of subdivision, even if it has more than one type of distinct administrative area that could qualify as a tribal subdivision

(e.g., tribal election districts, tribal water districts, or health service areas with different boundaries). Tribal subdivisions can only exist on the reservation and off-reservation trust land, but tribal subdivisions do not have to cover the entire reservation and trust land. The Census Bureau recognizes two types of tribal subdivisions - active (A) or inactive (I):

- Active subdivisions are defined as having a functioning government, with elected officials, that provides programs and services.
- Inactive subdivisions have no functioning government or elected officials and receive services solely from the tribe.

The name of each tribal subdivision must reflect its name, as cited in recent legal documentation and/or used by the tribal government, for administrative purposes.

3.2 CDP Submissions

CDPs are closely settled, unincorporated communities that are locally recognized and identified by name. They are the statistical equivalents of incorporated places, with the primary differences being the lack of a legally defined boundary and an active, functioning governmental structure, chartered by the state, and administered by elected officials.

Participants have the option to submit new CDPs, make boundary corrections to existing CDPs, and remove CDPs through BAS.

3.3 Street Submissions

It is important that Census Bureau data reflects the most recent streets to locate housing units and delineate statistical areas. The Census Bureau will not accept files containing a complete street network. Instead, we will accept following street updates:

- Adding named streets missing in the Census Bureau BAS Partnership Edges shapefile (PVS_25_v2_edges.shp). The edges shapefile is described in **Table 7**. The new streets must be named and exist on the ground or be under construction (no paper or planned streets).
- Deletions for streets in the Census Bureau BAS Partnership Edges shapefile that does not exist or are in the incorrect location.
- Reshapes for spatially inaccurate named streets in the Census Bureau BAS Partnership Edges shapefile.
- Renames and MAF/TIGER Feature Class Code (MTFCC) reclassifications for streets with incorrect street names and/or MTFCC values in the Census Bureau BAS Partnership Edges shapefile.

The street name and MTFCC are required for any roads being added to the Census Bureau's streets network. The Census Bureau does not accept new street adds for driveways, parking lot roads, unnamed alleys and other types of unnamed or non-addressable streets. More information about MTFCCs can be found in section **4.4**.

CHAPTER 4   BAS PARTNERSHIP SHAPEFILES

The BAS Partnership Shapefiles reflect the legal boundaries and names for all governments, as reported through the previous year's BAS.

4.1   Accessing the BAS Partnership Shapefiles

The Census Bureau's partnership shapefiles are available for download from the Partnership Shapefiles webpage. These files are in GCS NAD83 format and can be projected into any local coordinate system/project. Most GIS software packages will allow users to transform file coordinate systems and projections.

IMPORTANT: Be certain to select the version used for BAS (v2) and not the other versions that may appear on the page.

4.2   Shapefile Names

State-level Shapefile Names–PVS_25_v2_<layername>_<SS>.shp where <SS> is the two-digit code corresponding to the state, for example, "25" and <layername> is the abbreviation for the geography type represented in the shapefile. No state level shapefiles are described in section **4.3**.

Table 4: State Shapefile Names

Shapefile Layer	<layername>
Alaska Native Regional Corporation	anrc
American Indian / Alaska Native Areas – Statistical	aias
American Indian Areas – Legal	aial
American Indian Areas 2020 – Legal	aial2020
American Indian Tribal Subdivisions – Legal	aitsl
American Indian Tribal Subdivisions – Statistical	aitss
Congressional Districts	cd
Core Based Statistical Areas	cbsa
Hawaiian Home Lands	hhl
School Districts (Elementary)	elsd
School Districts (Secondary)	scsd
School Districts (Unified)	unsd
School Districts Administrative Areas	sdadm

Shapefile Layer	<layername>
State Legislative Districts (Upper / Senate)	sldu
State Legislative Districts (Lower / House)	sldl
Public Use Microdata Areas 2020	puma2020
2020 Census Tracts	tracts2020
Census Designated Places	cdp
Counties and Equivalent Areas	county
Counties and Equivalent Areas 2020	county2020
County Subdivisions – Legal	mcd
Incorporated Places	place
States and Equivalent Areas	state
Tribal Block Groups	tbg
Tribal Census Tracts	tct
Urban Areas Census 2020	uac
Block Area Grouping	bag

County-level Shapefile Names–PVS_25_v2_<layername>_<SSCCC>.shp, where <SSCCC> is the five-digit code corresponding to the state and county, for example, "24001" and <layername> is the abbreviation for the geography type represented in the shapefile.

Table 5: County Shapefile Names

Shapefile Layer	<layername>
Alaska Native Regional Corporation	anrc
American Indian / Alaska Native Areas – Statistical	aias
American Indian Areas – Legal	aial
American Indian Tribal Subdivisions – Legal	aitsl
American Indian Tribal Subdivisions – Statistical	aitss
Congressional Districts	cd
Core Based Statistical Areas	cbsa
Hawaiian Home Lands	hhl

Shapefile Layer	<layername>
School Districts (Elementary)	elsd
School Districts (Secondary)	scsd
School Districts (Unified)	unsd
School Districts Administrative Areas	sdadm
State Legislative Districts (Upper / Senate)	sldu
State Legislative Districts (Lower / House)	sldl
Public Use Microdata Areas 2020	puma2020
Urban Growth Areas	uga
Census Block Groups	bg
Census Blocks – Current	tabblock
Census Blocks – 2020 Census	tabblock2020
Census Tracts – Current	curtracts
2020 Census Tracts	tracts2020
Census Designated Places	cdp
Consolidated Cities	concity
Counties and Equivalent Areas	county
County Subdivisions for counties with Legal Subdivisions	mcd
County Subdivisions for counties with Legal Subdivisions	ccd
Incorporated Places	places
Subbarios	submcd
Tribal Block Groups	tbg
Tribal Census Tracts	tct
Urban Areas 2020 Census	uac
All Lines	edges
Area Landmarks	arealm
Hydrography – Area	water

Shapefile Layer	<layername>
Point Landmarks	pointlm
Geographic Offsets	offset
Block Area Grouping	bag
Face Geometry with all geocodes	faces

County-level Relationship Table Names–PVS_24_v2_<dbfname>_<SSCCC>.dbf, where <SSCCC> is the five-digit code corresponding to the state and county, for example, "24001" and <dbfname> is the abbreviation for the relationship type. These files have no geometry but can be joined with county-level shapefiles in a GIS to provide additional attribution. See the table below for details on the common fields and county-level shapefiles to use for joining.

Table 6: Relationship Table Names

Relationship Table	<dbfname>	Common Field	County-level Shapefile
Topological Faces – Area Landmark Relationship	areafaces	TFID	Face Geometry with all geocodes <faces>
Topological Faces – Area Hydrography Relationship	hydrofaces	HYDROID	Hydrography – Area <water>
Address Ranges	addr	TLID	All lines <edges>
Linear Feature Names – Fielded	allnames	TLID	All lines <edges>

4.3   Shapefile Layouts

The tables in this section show the shapefile layouts for the county-level partnership shapefiles most used during BAS.

Table 7: Edges Shapefile (PVS_25_v2_edges)

Attribute Field	Length	Type	Description
STATEFP	2	String	State code
COUNTYFP	3	String	County code
TLID	10	Number	Permanent Edge ID
TFIDL	10	Number	Permanent Face ID (Topological Polygon) ID (left)
TFIDR	10	Number	Permanent Face ID (Topological Polygon) ID (right)
MTFCC	5	String	MAF/TIGER Feature Class code
FIDELITY	1	String	Flag indicating whether boundary edge has changed

Attribute Field	Length	Type	Description
			through spatial enhancement
FULLNAME	40	String	Complete name associated with the edge includes abbreviated qualifier, direction, and feature type
SMID	22	String	Spatial metadata ID
SMIDTYPE	1	String	Source attribution for boundary edges, PLSS, Parcels, Surveyed, etc.
RTTYP	1	String	Route type code
BBSPFLG	1	String	Indicates the Redistricting Data Project participant's submitted request of an EDGE for selection for holding
CBBFLG	1	String	Indicates status of an edge for a selection as a tabulation block boundary
BBSP_2030	1	String	New BBSP flag
CHNG_TYPE	4	String	Type of linear feature update
JUSTIFY	150	String	Justification
LTOADD	10	String	Left to address
RTOADD	10	String	Right to address
LFROMADD	10	String	Left from address
RFROMADD	10	String	Left to address
ZIPL	5	String	Left ZIP Code
ZIPR	5	String	Right ZIP Code
EXTTYP	1	String	Extension type
MTUPDATE	10	Date	Date of last update to the edge

Table 8: Census Block Shapefile (PVS_25_v2_tabblock2020)

Attribute Field	Length	Type	Description
STATEFP20	2	String	State code from 2020
COUNTYFP20	3	String	County code from 2020
TRACTCE20	6	String	Census tract code from 2020
BLOCKCE	4	String	Tabulation block number from 2020
BLOCKID20	15	String	Concatenation of the state code, county code, census tract code, and the tabulation block number fields
PARTFLG	1	String	Part flag indicator, indicates if only part of a feature is represented
HOUSING20	9	Number	Housing count from the 2020 Census
POP20	9	Number	Population count from the 2020 Census

Table 9: Census Tract Shapefile (PVS_25_v2_curtracts)

Attribute Field	Length	Type	Description
STATEFP	2	String	State code
COUNTYFP	3	String	County code
TRACTCE	6	String	Census tract code
NAME	100	String	Base name portion of the standardized name
TRACTID	11	String	Concatenation of the state code, county code, and census tract code fields
NEW_CODE	6	String	New tract code
CHNG_TYPE	2	String	Type of area update
EFF_DATE	10	Date	Effective date or vintage
TRACTTYP	1	String	Census tract characteristic flag
RELATE	120	String	Relationship description
JUSTIFY	150	String	Justification
TRACTLABEL	7	String	Census tract number used for Local Update of Census Addresses (LUCA) geocoding
VINTAGE	2	String	Vintage

Table 10: American Indian Areas Shapefile (PVS_25_v2_aial)

Attribute Field	Length	Type	Description
STATEFP	2	String	State code
COUNTYFP	3	String	County code
GOVID	11	String	11-digit GOVID
AIANNHCE	4	String	Census AIANNH code
COMPTYP	1	String	Indicates if reservation (or equivalent) or off-reservation trust land is present, or both
AIANNHFSR	1	String	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group
NAMELSAD	100	String	Name with the translated Legal/Statistical Area Description (LSAD)
AIANNHNS	8	String	ANSI numeric identifier for AIANNH areas
LSAD	2	String	Legal/Statistical Area Description code
FUNCSTAT	1	String	Functional status code
CLASSFP	2	String	Class code describing an entity
PARTFLG	1	String	Part flag indicator, indicates if only part of a feature is represented
CHNG_TYPE	2	String	Type of area update
EFF_DATE	10	Date	Effective date or vintage
AUTHTYPE	1	String	Authorization type for legal area updates
DOCU	120	String	Supporting documentation
AREA	10	Number	Acreage of area update
RELATE	120	String	Relationship description
JUSTIFY	150	String	Justification
NAME	100	String	Name
VINTAGE	2	String	Vintage

Table 11: County and Equivalent Areas Shapefile (PVS_25_v2_county)

Attribute Field	Length	Type	Description
STATEFP	2	String	State code
COUNTYFP	3	String	County code
GOVID	11	String	11-digit GOVID
COUNTYNS	8	String	American National Standards Institute feature code for the county or equivalent feature
NAMELSAD	100	String	Name with the translated Legal/Statistical Area Description (LSAD)
LSAD	2	String	Legal/Statistical Area Description code
FUNCSTAT	1	String	Functional status code
CLASSFP	2	String	Class code describing an entity
CHNG_TYPE	2	String	Type of area update
EFF_DATE	10	Date	Effective date or vintage
AUTHTYPE	1	String	Authorization type for legal area updates
DOCU	120	String	Supporting documentation
AREA	10	Number	Acreage of area update
RELATE	120	String	Relationship description
JUSTIFY	150	String	Justification
NAME	100	String	Name
VINTAGE	2	String	Vintage

Table 12: County Subdivisions Shapefile (PVS_25_v2_mcd)

Attribute Field	Length	Type	Description
STATEFP	2	String	State code
COUNTYFP	3	String	County code
GOVID	11	String	11-digit GOVID
COUSUBFP	5	String	County Subdivision code
NAMELSAD	100	String	Name with the translated Legal/Statistical Area Description (LSAD)
COUSUBNS	8	String	American National Standards Institute feature code for the county subdivision
LSAD	2	String	Legal/Statistical Area Description code
FUNCSTAT	1	String	Functional status code
CLASSFP	2	String	Class code describing an entity
CHNG_TYPE	2	String	Type of area update
EFF_DATE	10	Date	Effective date or vintage
AUTHTYPE	1	String	Authorization type for legal area updates
DOCU	120	String	Supporting documentation
AREA	10	Number	Acreage of area update
RELATE	120	String	Relationship description
JUSTIFY	150	String	Justification
NAME	100	String	Name
VINTAGE	2	String	Vintage

Table 13: Incorporated Place Shapefile (PVS_25_v2_place)

Attribute Field	Length	Type	Description
STATEFP	2	String	State code
COUNTYFP	3	String	County code
PLACEFP	5	String	Place code
GOVID	11	String	11-digit GOVID
NAMELSAD	100	String	Name with the translated Legal/Statistical Area Description (LSAD)
PLACENS	8	String	American National Standards Institute feature code for the place
LSAD	2	String	Legal/Statistical Area Description code
FUNCSTAT	1	String	Functional status code
CLASSFP	2	String	Class code describing an entity
PARTFLG	1	String	Part flag indicator, indicates if only part of a feature is represented
CHNG_TYPE	2	String	Type of area update
EFF_DATE	10	Date	Effective date or vintage
AUTHTYPE	1	String	Authorization type for legal area updates
DOCU	120	String	Supporting documentation
AREA	10	Number	Acreage of area update
RELATE	120	String	Relationship description
JUSTIFY	150	String	Justification
NAME	100	String	Name
VINTAGE	2	String	Vintage

Table 14: Census Designated Places Shapefile (PVS_25_v2_cdp)

Attribute Field	Length	Type	Description
STATEFP	2	String	State code
COUNTYFP	3	String	County code
PLACEFP	5	String	Place code
PLACENS	8	String	American National Standards Institute feature code for the place
NAMELSAD	100	String	Name with the translated Legal/Statistical Area Description (LSAD)
LSAD	2	String	Legal/Statistical Area Description code
FUNCSTAT	1	String	Functional status code
CLASSFP	2	String	Class code describing an entity
PARTFLG	1	String	Part flag indicator, indicates if only part of a feature is represented
CHNG_TYPE	2	String	Type of area update
EFF_DATE	10	Date	Effective date or vintage
RELATE	120	String	Relationship description
JUSTIFY	150	String	Justification
NAME	100	String	Name
VINTAGE	2	String	Vintage

Table 15: Consolidated Cities Shapefile (PVS_25_v2_concity)

Attribute Field	Length	Type	Description
STATEFP	2	String	State code
COUNTYFP	3	String	County code
CONCITYFP	5	String	Consolidated city code
GOVID	11	String	11-digit GOVID
NAMELSAD	100	String	Name with the translated Legal/Statistical Area Description (LSAD)
PLACENS	8	String	American National Standards Institute feature code for the place
LSAD	2	String	Legal/Statistical Area Description code
FUNCSTAT	1	String	Functional status code
CLASSFP	2	String	Class code describing an entity
CHNG_TYPE	2	String	Type of area update
EFF_DATE	10	Date	Effective date or vintage
AUTHTYPE	1	String	Authorization type for legal area updates
DOCU	120	String	Supporting documentation
AREA	10	Number	Acreage of area update
RELATE	120	String	Relationship description
JUSTIFY	150	String	Justification
NAME	100	String	Name
VINTAGE	2	String	Vintage

4.4 MTFCC Descriptions

The MTFCC is a 5-digit code assigned by the Census Bureau to classify and describe geographic objects or features. A full list of MTFCC codes and descriptions can be found at <www.census.gov/library/reference/code-lists/mt-feature-class-codes.html>.