

Attachment E

Digital Instructions for Participants Not Using the MAF/TIGER Partnership Software

Version 2
October 2008

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Note: Grey highlighted text indicates updates since Version 1

I. Preface

The MAF/TIGER Partnership Software (MTPS) is the Census Bureau's primary tool for submission and review of Voting Districts and Block Boundary Suggestions. However, this attachment to the General Guidelines provides specific instructions for those participants wishing to use their own Geographic Information System (GIS) software for modifying the Census Bureau supplied shapefiles.

You will find a DVD data disc provided to your state for this project. This DVD includes shapefiles for all the counties in your state.

It is assumed that if you are not using the MTPS, you are skilled in the use of your own GIS software. It is further assumed that you have completed a thorough review of the General Guidelines and accompanying attachments. This document provides:

- Criteria for creating Voting Districts and suggesting Block Boundaries to be held or not to be held.
- Census provided and returned data specifications.
- Procedural instructions for a sample method of processing the provided Census files for the creation of a submission for Phase 2 of the 2010 Census Redistricting Data Program.

II. Performing Voting District (VTD) Tasks

A. Creating VTDs

New for 2010 Census: Nonvisible Voting District Boundaries

The Census Bureau has changed its policy on the acceptance of VTD boundaries. In the past, we required you to modify your VTDs that followed non-visible boundaries, such as section lines or rear lot lines. Although we still believe visible features make better geographic boundaries, we will accept non-visible VTD boundaries. If your state requires the VTDs to follow visible features, the Census Bureau expects the State Liaison to communicate that information to any local officials submitting the VTDs and modify the submission to comply with the state law.

Feature Updates

As mentioned in the General Guidelines, the next Census Bureau effort for updating roads will be the Address Canvassing Operation next spring/summer (2009). We will not insert new streets added during the initial VTD/BBSP program because those streets will be added during that operation. If multiple programs add the same roads, we run a significant risk of having duplicates in the file. Add a line during VTD/BBSP to represent a road or other missing feature **only** if that feature serves as a VTD boundary or is needed as a suggested block boundary and we require that you submit imagery to support the added feature. Verification materials will provide you an opportunity to review the roads added as part of our Address Canvassing Operation and add roads that were not picked up.

Delineating VTDs Prior to Making Block Boundary Suggestions

Because your VTD boundaries will be held as 2010 Census tabulation block boundaries, delineating your VTD boundaries first may preclude your having to suggest as many “Must Holds.”

VTD Criteria

- **VTD** - VTD codes can range from 1-6 alphanumeric characters. This includes spaces, dashes, dots, or forward slashes. If you want to use a different character, notify the RCC staff. (See **Attachment C** for contact information.)
- **VTD** - When annotating a VTD boundary along a road that is shown as a double-line, you can select the faces along either one of the lines to be the boundary, but be consistent. For some of the hydrographic features, there may be three lines for selection: (1) The left shore, (2) the middle

centerline, or (3) the right shore. You may select any of these, but be consistent throughout the length of the boundary edge.

- **VTD** - VTDs must be contained within a single county. They may not cross county boundaries.
- **VTD** - VTDs are often, but not required to be, named. If a name is not supplied, the Census Bureau will use the VTD code as the name. Names can be up to 100 characters, including spaces, alphanumeric and special characters. Names will appear on the Census Bureau's data website, the American FactFinder, and in the PL 94-171 summary files when the data is released after the 2010 Census.
- **VTD** - Codes and names should be consistent and reviewed for spelling accuracy.
- **VTD** - We request that you code all areas, including water, to a VTD. If you do not code each area, the Census Bureau will assign the code of "ZZZZZ" to the unassigned areas. This allows us to ensure we have all areas coded to a VTD.

VTD - VTDs can be identified as "actual" or "pseudo." An "actual" VTD is one that exactly matches the precincts or other election areas in your state. You may choose to identify your submitted VTDs as "actual." Otherwise they will be considered "pseudo" so as not to confuse the data user. For example, states may choose to identify multiple layers of election areas within their VTD framework and may wish to identify them as pseudo. This is an acceptable approach to the submission of the VTD plans.

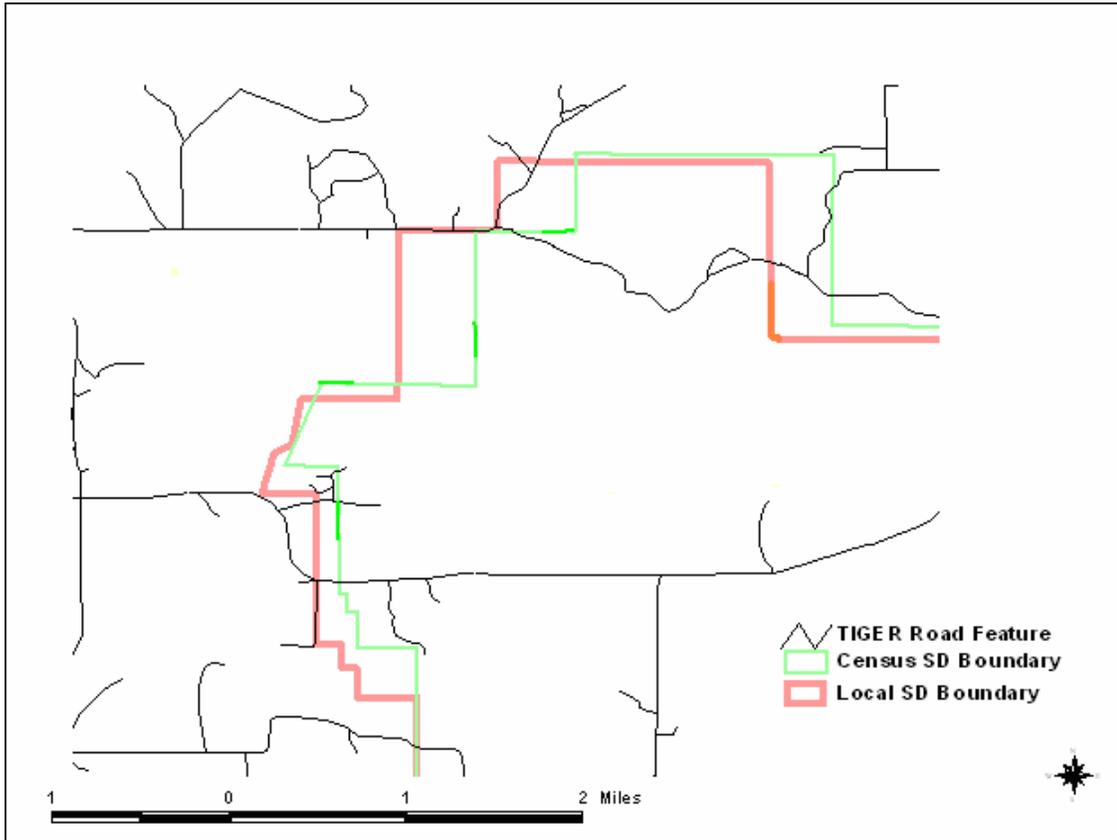
- **VTD** - Adding or deleting a physical feature requires providing imagery or a reliable map source to prove that the feature exists or no longer exists. (See instructions in the "**Including Imagery or Maps**" section on page 19.)

If Your State Data Does not Match Census Bureau Data

Features in your files may appear in a spatially different location from the same features in the Census file. For example, if your VTD follows a school district boundary and the location of the school district is different in the two files, you must use our school district boundary location. This situation is demonstrated in the graphic below. If you think the school district boundary is incorrect or is out-of-date, contact the Geography Division by sending an e-mail to GEO.redistricting.list@census.gov. If the boundary needs to be corrected, we will work with our school district mapping coordinator to correct our school district boundaries, and if they agree, the change will be reflected in a later Census Bureau shapefile product.

To ensure that the VTD and the school district boundary maintain that relationship, provide relationship information as instructed in **Attachment B**.

Census Bureau and Local School District boundaries have a similar shape but are in different locations.



Boundary Kinks and distortions

Some states are finding that their state boundaries and other boundaries for legal areas within their state have kinks and boundary distortions. Here is an example of what you might find in your data file:



If you can not correctly delineate the boundary for an entity you are updating because the feature you need to follow is incorrectly located, mislabeled or distorted in the Census Bureau's file, we request that you put the boundary on the problematic feature in our file. This will establish for us what feature you want the boundary to follow. In addition, we request that you report the problem area to the Census Bureau (through your regional office contact) by sending information describing the incorrect feature including the TIGER Line Identifier (TLID) and the specific entity boundary affected. This can be done using e-mail with information to describe the problem such as an image file, PDF or other medium showing the appropriate correction.

Legal Boundary Corrections; State/County/MCD/place

The Census Bureau can not accept city, minor civil division, county, or American Indian Area boundary changes from VTD/BBSP respondents. It is very important that this boundary information be coordinated within the state and come to the Census Bureau through the BAS respondent. In some states the Census Bureau has a state-level BAS agreement and we can provide more information about these agreements upon request.

As you are completing the work for VTD/BBSP, you may notice legal boundaries that are not up-to-date. When this occurs, we request that you contact the BAS respondent in your state and encourage them to report all changes to the legal boundary for the governmental unit. To receive the appropriate BAS contact information, submit an e-mail to geo.bas@census.gov. Include in the e-mail, the entity in question, your name, phone number, and if possible an e-mail address.

III. Performing BBSP Tasks

The data you will receive as part of Phase 3 of the Redistricting Data Program includes data at the census tabulation block level. Therefore, the Census Bureau gives states the opportunity to suggest visible features for use as 2010 Census tabulation block boundaries. Because we are allowing VTDs to be inserted into our database as nonvisible lines and these lines will automatically become a 2010 Census tabulation block boundary, you do not need to identify these as block boundary suggestions. To identify other linear features that you want us to hold or not hold as 2010 Census tabulation block boundaries, you will use the “**BBSP**” toolbox. You can also create Block Area Groups using this toolbox if it is desirable for several islands to be in a single 2010 Census tabulation block.

All “Hold” block boundary suggestions are contingent upon the lines intersecting to form a closed polygon at the time we create the 2010 Census tabulation blocks, which will be in the fall of 2010. For this reason all block boundary suggestions must form a closed polygon.

A. Planned 2010 Census Tabulation Block Boundaries

We are providing below, a list of all the feature and boundary types that are currently planned to be held as 2010 Census tabulation block boundaries and therefore would not need to be suggested as a “Hold.” In some instances you may not want the line to become a 2010 Census block boundary. These are much less common but it is acceptable to flag a line as a “Do Not Hold.”

Note: If any other program sponsored by the Census Bureau uses that line as a boundary, the Census Bureau will override the “Do Not Hold” status of the line.

Entities: The boundaries, as of January 1, 2010 for each of the entities listed below, are planned 2010 Census tabulation block boundaries and therefore do not have to be selected as part of the BBSP work. These boundaries may change between now and January 1, 2010.

MTFCC	Description
G2120	Hawaiian Home Land
G2130	Alaska Native Village Statistical Area
G2140	Oklahoma Tribal Statistical Area
G2150	State-designated Tribal Statistical Area
G2160	Tribal Designated Statistical Area
G2170	American Indian Joint Use Area
G2200	Alaska Native Regional Corporation
G2300	Tribal Subdivision
G2400	Tribal Census Tract
G2410	Tribal Block Group
G4000	State or State Equivalent

G4020	County or State Equivalent
G4040	County Subdivision
G4060	Sub-Minor Civil Division
G4110	Incorporated Place
G4120	Consolidated City
G4210	Census Designated Place
G5020	Census Tract
G5030	Block Group
G5035	Block Area Grouping
G5200	Congressional District
G5210	State Legislative District (Upper Chamber)
G5220	State Legislative District (Lower Chamber)
G5240	Voting District
G5400	Elementary School District
G5410	Secondary School District
G5420	Unified School District
G5430	Special School Administrative Area
G6320	Traffic Analysis Zone
G6330	Urban Growth Area
K2110	Military Installation
K2181	National Park Service Land

Features: The features listed below will qualify as 2010 Census tabulation block boundaries based on criteria. They may need to be selected as “Holds.” You must use the values stored in the “CBBFLG” field of the “All Lines” layer to determine if a line is a planned 2010 Census tabulation block. See more details on this in the next section.

MTFCC	Description
S1100	Primary Road
S1200	Secondary Road
S1400	Local Neighborhood Road, Rural Road, City Street
S1500	Vehicular Trail (road passable only by a 4 wheel drive)
R1011	Main Line Railroad Feature
P0002	Perennial Water

Note: Feature Extensions and Powerlines are not planned to be held as 2010 Census block boundaries, but they are eligible to be selected as a “Hold.”

B. Making Block Boundary Suggestions

To assist you with choosing any features that you may want held or not held, the edges, or lines, layer contains three attributes: The first identifies all currently planned 2010 Census block boundary lines and ineligible lines. A second identifies Census 2000 BBSP “Must Holds” and Census 2000 BBSP “Do Not Holds.” A third attribute field is designed to capture your 2010 Census block boundary suggestions.

Block boundary suggestions are made by assigning a value of “1” for Must Hold or “2” for Do Not Hold to the 2010_BBSP field of the lines for which you want to make a suggestion. These lines must be included along with any added or deleted lines in the returned changed lines shapefile. Use CHNG_TYPE = CA for pre-existing lines that are only included in the changed lines shapefile because they have a block boundary suggestion.

Attribute	Field and Legal Value
Census 2000 Must Holds	BBSPFLG = 1
Census 2000 Do Not Holds	BBSPFLG = 2
Planned 2010 Census Block Boundary	CBBFLG = 4
Ineligible 2010 Census Block Boundary	CBBFLG = 9
2010 Census Participant Hold	2010_BBSP = 1 (filled by participant)
2010 Census Participant Do Not Hold ⁺	2010_BBSP = 2 (filled by participant)
⁺ A 2010 Census Participant Do Not Hold will only be implemented as long as no other program requires the line be held	

If you want to suggest a “Hold” on an existing feature that does not form a closed polygon, you may want to add a feature extension, (MAF/TIGER Feature Class Code [MTFCC] P0004). We recommend feature extensions be no longer than 300 feet and as a direct extension of an existing line. Extensions should terminate on a non-road feature.

It is also possible to review some of the Census 2000 feature extensions. They can be located by finding all lines with both attributes of BBSPFLG = 1 and an MTFCC = P0001. Note that these extensions may have been distorted during our MAF/TIGER Accuracy Improvement Project (MTAIP) process. For more information about MTAIP, please refer to the General Guidelines.

C. Block Area Groups (Island Groupings)

During the 2010 Census tabulation block delineation, the Census Bureau will automatically group islands to form a single tabulation block if they have no road features and fall within a 5 kilometer radius.

You also may group specific islands for identification as a single 2010 Census tabulation block. These are called Block Area Groups (BAGs). BAGs are exempt from the 5 kilometer radius requirement. Grouping selected islands to create a unique block identification is done by delineating a polygon around the selected islands. When creating a BAG, digitize the polygon around the set of desired islands making sure not to cross any land areas or an existing BAG perimeter, but you can connect a new BAG to the side of an existing one. If it crosses any other tabulations areas, it will be split along that line as well.

The BAG layer you create should be a simple polygon shapefile named RDP_<SSCCC>_bag.* where the <SSCCC> is the FIPS state and county code for the county whose BAGs you are creating. The shapefile should have two text fields; BAGCE (length of 3), and MTFCC (length of 5). When creating your BAGs provide each with a number in the BAGCE field. Start with 001 and increment by 1 for each BAG created. The MTFCC should always be G5035.

D. Block Boundary and Block Area Group Criteria

- **BBSP** - All participant-provided 2010 Census “Holds” must form closed polygons.
- **BBSP** - 2010 Census planned tabulation block boundaries, or “planned holds,” are an indication of what we would plan to use as a 2010 Census tabulation block boundary if they were defined today. The “planned holds” may change if the criteria changes, or if the attributes are updated through other Census programs.
- **BBSP** - Participant provided 2010 Census “Do Not Holds” will not be accepted if the line they are placed on needs to be held for other purposes. (ex. If a “Do Not Hold” were placed on a city limit, that would not be accepted, as the city limit is needed as a tabulation block boundary.)
- **BBSP** - Adding or deleting a physical feature requires providing imagery or some other source to prove that the feature exists or no longer exists. (See instructions in the “**Including Imagery or Maps**” section on page 19.)
- **BBSP** - Try to use existing lines if possible. Features in your files may appear in a spatially different location from the same features in the Census file. When this occurs, it is important to use the existing Census feature rather than try to add a duplicate based on the location in your file. This will help us maintain the topological relationships that are crucial to correctly allocating population.
- **BAGS** - The perimeter of a Block Area Grouping (BAG) must be entirely over water.

- **BAGS** - BAGs can not overlap.
- **BAGS** – BAGs will be split if they cross the boundary of other tabulation geographies.

IV. Census Provided Data and Returned Data Specifications

A. Type and Projection

The Census Bureau is providing all digital participants with entity layers in ESRI shapefile¹ format. The data provided will include a series of polygon-based shapefiles, a single linear shapefile, and several relational .dbf tables for each county. It is recommended that participants re-project their data files to match those provided by the Census Bureau to ensure correct alignment of the data. However, returned shapefiles may be in any projection as long as the projection information and the *.prj file are provided. A complete data dictionary is provided at the end of this attachment.

All shapefiles provided by the Census Bureau are in the following unprojected geographic based coordinate system:

- GCS_NAD83
- Angular Unit: Degree (0.017453292519943299)
- Prime Meridian: Greenwich (0.000000000000000000)
- Datum: D_North_American_1983
- Spheroid: GRS_1980
- Semi-major Axis: 6378137.0000000000000000
- Semi-minor Axis: 6356752.314140356100000000
- Inverse Flattening: 298.257222101000020000

B. Provided Files

The Census Bureau is providing a large number of files in support of this program. There are both state level and county level files as part of the data delivery. The naming conventions for the files are as follows:

File Naming Convention – County-based Files

County-Based Redistricting Data Program (RDP) Shapefile Naming Convention =

RDP_<XXXX>_<YYYY>_<ST><COU>.<ZZZ>

Where <XXXX> = start year of the RDP program.

Where <YYYY> = the <layer>

Where <ST> = FIPS State Code

Where <COU> = FIPS County Code

Where <ZZZ> = three letter file extension (shp, shx, dbf, prj)

Example: Maricopa County, Arizona All Lines shapefiles would be RDP_2007_edges_04013.shp

¹ The use of brand names does not represent an endorsement of a company or its products by the U.S. government. Due to the wide use of ESRI products by our partners in the GIS community, and the ubiquitous use of the shapefile format as a medium for GIS data exchange, the Census Bureau is providing this data in shapefile format. You should encounter no problems when importing these shapefiles into your local GIS software. However, if you are using GIS software that does not contain a shapefile translator, please contact the Census Bureau for further instructions (301-763-1099) or e-mail redistricting@geo.census.gov.

File Naming Convention – State-based Files

RDP_<XXXX>_<YYYY>_<ST>.<ZZZ>

Where <XXXX> = start year of the RDP program.

Where <YYYY> = the <layer>

Where <ST> = FIPS State Code

Where <ZZZ> = three letter file extension (shp, shx, dbf, prj)

Example: Arizona American Indian Areas (AIA) - Legal shapefile would be RDP_2007_aial_04.shp

File Naming Convention – Layer Key

Shapefile Layer	Geographic Level	<layer> Name
Alaska Native Regional Corporations (ANRC)	County	Anrc
Alaska Native Regional Corporations (ANRC)	State	Anrc
American Indian Areas (AIA) - Legal	County	Aial
American Indian Areas (AIA) - Legal	State	Aial
American Indian / Alaska Native Areas (AIANA) – Statistical	County	Aias
American Indian / Alaska Native Areas (AIANA) – Statistical	State	Aias
American Indian Tribal Subdivisions (AITS) - Legal	County	Aitsl
American Indian Tribal Subdivisions (AITS) - Legal	State	Aitsl
American Indian Tribal Subdivisions (AITS) – Statistical	County	Aitss
American Indian Tribal Subdivisions (AITS) – Statistical	State	Aitss
Congressional Districts (CD)	County	Cd
Congressional Districts (CD)	State	Cd
Hawaiian Home Lands (HHL)	County	Hhl
Hawaiian Home Lands (HHL)	State	Hhl
School Districts (Elementary) (ELSD)	County	Elsd
School Districts (Elementary) (ELSD)	State	Elsd
School Districts (Secondary) (SCSD)	County	Scsd
School Districts (Secondary) (SCSD)	State	Scsd
School Districts (Unified) (UNSD)	County	Unsd
School Districts (Unified) (UNSD)	State	Unsd
State Legislative Districts (Upper/Senate) (SLDU)	County	Sldu
State Legislative Districts (Upper/Senate) (SLDU)	State	Sldu
State Legislative Districts (Lower/House) (SLDL)	County	Sldl
State Legislative Districts (Lower/House) (SLDL)	State	Sldl
Urban Growth Areas (UGA)	County	Uga
Voting Districts – Census 2000 (VTD2000)	County	vtd2000
Voting Districts – Census 2000 (VTD2000)	State	vtd2000

Census Block Groups	County	Bg
Census Blocks – Current	County	Tabblock
Census Blocks – Census 2000	County	tabblock2000
Census Tracts	County	Curtracts
Census Designated Places (CDP)	County	Cdp
Census Designated Places (CDP)	State	Cdp
Consolidated Cities	County	Concity
Counties and Equivalent Areas	County	County
Counties and Equivalent Areas	State	County
County Subdivisions – Legal	County	Mcd
County Subdivisions – Statistical	County	Ccd
County Subdivisions	State	Mcd
Incorporated Places	County	Place
Incorporated Places	State	Place
States and Equivalent Areas	State	State
Subbarrios	County	Submcd
All Lines	County	Edges
Area Landmark	County	Arealm
Hydrography – Area	County	Water
Point Landmarks	County	Pointlm
RELATIONSHIP TABLES		
Topological Faces (Listing of faces with all geocodes)	County	Faces
Topological Faces - Area Landmark Relationship	County	Areafaces
Topological Faces - Area Hydrography Relationship	County	Hydrofaces
Address Ranges	County	Addr
Linear Feature Names	County	Allnames

C. Returned Files

The Census Bureau requires that the returned shapefiles have specific attributes and characteristics in order for us to accept and process them.

- All VTD returned shapefiles need to be county based and provide full coverage for that county.
- All State Legislative District Lower (SLDL), State Legislative District Upper (SLDU), and Congressional District (CD) returned shapefiles need to be county based and provide the full (within that county) coverage of any SLDL, SLDU, or CD that has changes.
- All returned VTD shapefiles should follow the naming structure detailed below.

File Naming Convention – Returned VTD County-based Files

County-Based RDP Shapefile Naming Convention =

RDP_<ST><COU>_VTD_WholeEntity.<ZZZ>

Where <ST> = FIPS State Code

Where <COU> = FIPS County Code

Where <ZZZ> = three letter file extension (shp, shx, dbf, prj)

Example: Maricopa County, Arizona's new VTD submission shapefile would be

RDP_04013_VTD_WholeEntity.shp

RDP_04013_VTD_WholeEntity.shx

RDP_04013_VTD_WholeEntity.dbf

RDP_04013_VTD_WholeEntity .prj

- All returned SLDL, SLDU, or CD shapefiles should follow the naming structure detailed below.

File Naming Convention – Returned SLDL, SLDU, or CD County-based Files

County-Based RDP Shapefile Naming Convention =

RDP_<ST><COU>_<YYYY>_Changes.<ZZZ>

Where <ST> = FIPS State Code

Where <COU> = FIPS County Code

Where <YYYY> = the <layer>

Where <ZZZ> = three letter file extension (shp, shx, dbf, prj)

Example: Maricopa County, Arizona's modified SLDL shapefile would be

RDP_04013_SLDL_Changes.shp

RDP_04013_SLDL_Changes.shx

RDP_04013_SLDL_Changes.dbf

RDP_04013_SLDL_Changes.prj

- In addition to the area coverages (VTDs, SLDLs, SLDUs, and CDs) returned for each county, a single line (edge) shapefile must also be returned. This shapefile should contain all new lines, any pre-existing lines to be deleted, and any lines, new or pre-existing, with a 2010 Census Block Boundary Suggestion Project designation.
- All returned Line (Edges) shapefiles should follow the naming structure detailed below.

File Naming Convention – Returned Line (Edge) County-based Files

County-Based RDP Shapefile Naming Convention =

RDP_<ST><COU>_Ln_Changes.<ZZZ>

Where <ST> = FIPS State Code

Where <COU> = FIPS County Code

Where <ZZZ> = three letter file extension (shp, shx, dbf, prj)

Example: Maricopa County, Arizona's modified lines shapefile would be

RDP_04013_Ln_Changes.shp

RDP_04013_Ln_Changes.shx

RDP_04013_Ln_Changes.dbf

RDP_04013_Ln_Changes.prj

- All area coverages must conform to Census supplied geography wherever possible. In order to preserve the topology of the Census Bureau's MAF/TIGER database (MTDP), participants must conflate their geographies to the existing Census supplied geographies. Sample methodology is supplied later in this document.
- All required attribute fields must be populated in the returned (VTD, SLDL, SLDU, CD, and Ln (edges)) shapefiles. The required fields are in bold in the data dictionary at the end of this attachment.
- It is not required, but is highly desirable, for you to include your local coverage files. These can be very useful when questions arise and will speed up the disposition of any problems.

D. Including Imagery or Maps

To add or delete a physical feature requires providing imagery or a reliable map source to prove that the feature exists or no longer exists. You can add your own imagery as a layer, mail, or fax an image or map, or provide a URL to display an image or map.

- Digital Imagery must be in a geo-referenced format (.jpeg world file or .tiff image with associated .tiff world file, etc). If you also submit the imagery to the Census Bureau in support of your feature adds and deletes, be sure to include the state and county FIPS as part of the name.
- If you want to provide a paper image or a map, you can mail or fax it to your RCC office. (See RCC contact information in **Attachment C**.) Clearly label your image or map with the shape IDs of the line or lines it describes.
- To supply a URL to display an image or map, include it in a table with the associated shape IDs it describes.

V. Sample Methodology for Creating VTDs and Doing Block Boundary Suggestions Using Your Own Shapefile as the Source

A. Adding and Preparing Data

1. Start a project by bringing in and symbolizing the edges layer by type (road, rail, hydrography, etc.). Later in the VTD creation process, this will provide you with a feature reference for deciding which VTD a polygon should be assigned to if your file and the Census provided files do not exactly align. It is suggested that you symbolize the edges layer based on the MTFCC codes. A description of specific MTFCC codes can be found in Attachment I. The basic groupings of the MTFCC codes are as follows: Sxxxx = Roads; Rxxxx = Railroads; Pxxxx = Invisible Features; Lxxxx = Other Linear Features; and Hxxxx = Hydrography.
2. Once the edges are symbolized, bring in the provided VTD2000 shapefile.
3. Finally, bring in your own VTD shapefile (also known as the local VTD file). It is highly suggested that the local VTD file be re-projected to match that of the Census provided files prior to adding it to your project.
4. For definitions of key terms (e.g. faces = polygons, edges = line segments, etc.) used in the remaining instructions, please refer to Attachment H.
5. As with all computerized editing operations it is imperative that you save your work frequently.

B. VTD Creation Sample Methodology

1. Convert the edges shapefile to a polygon shapefile which these instructions will call the “primitive faces” shapefile. This layer in combination with the Census VTD2000 layer will enable the user to select polygons for inclusion in a particular voting district. **It is important to note that the returned shapefile must have the same field structure as the VTD 2000 layer which is found in Section VI, Data Dictionary.**
2. Delete all attribute fields from the “primitive faces” shapefile except those that provide the shapefile’s geometry. Note: There may or may not be additional fields to delete.
3. Perform a union between the primitive faces shapefile and the provided VTD2000 shapefile to create the “primitive VTD faces” shapefile. This creates a layer showing the individual polygons that comprise the Census provided VTD2000 layer.

4. Delete any attribute fields from the “primitive VTD faces” shapefile not found in the provided VTD2000 shapefile. A table listing the fields of the VTD2000 shapefile can be found in the Data Dictionary at the end of this attachment.
5. Select one of your local VTDs.
6. Use the “select by location” tool to select all “primitive VTD faces” that fall completely within the selected local VTD.
7. Open the attribute table of the “primitive VTD faces” shapefile.
8. For the selected polygons, calculate the following fields for each district you are trying to create: STATEFP00; COUNTYFP00; NEW_CODE; NEW_NAME; VTDI (A for actual, P for pseudo). Also, calculate the CHNG_TYPE for these records to be an “E” (new entity). This can be done by calculating these values for the selected polygons of the “primitive VTD faces” shapefile.
9. For the selected polygons, delete the values contained in the following fields: VTDST00; NAMELSAD; LSAD; EFF_DATE; NAME; VINTAGE; and FUNCSTAT.
10. Repeat for each local VTD until each district from your local file has been assigned. Some faces, if they are not completely within a single local VTD, will still not be assigned at this time. We will address these faces in the next step.
11. Review each remaining unassigned polygon in relation to the features in the edges shapefile and the local VTD file to determine which VTD it should belong to. It is very important at this stage to assign the faces based on equivalent bounding features between the edges shapefile and the local VTD shapefile. Simply basing these decisions on the spatial accuracy of the local file will cause the topological relationships between features and the VTDs to be broken and may result in misallocation of population. If a new boundary line must be added to split the primitive VTD face, use the editing functions to digitize the split and then assign each piece of the polygon to its appropriate VTD. Also, remember to populate the required attributes in the primitive VTD face shapefile for each piece that gets assigned.
12. If there are old VTDs in the “primitive VTD faces” shapefile that you want to keep, select them by their VTD code and then copy the NAME and VTDST00 fields into the NEW_NAME and NEW_CODE fields respectively. Also, calculate the VTDI and CHNG_TYPE fields as done previously.

13. Once you have copied the field values, delete the values contained in the following fields: VTDST00; NAMELSAD; LSAD; EFF_DATE; NAME; VINTAGE; and FUNCSTAT.
14. Check for unassigned polygons by screening for polygons with no value in the NEW_CODE field.
15. Once all the polygons have been assigned to VTDs, perform a dissolve on the “primitive VTD faces” shapefile using all of the fields as listed in the VTD2000 shapefile. This will dissolve the VTDs into single polygons while preserving all of the fields.
16. Check for discontinuous districts. If necessary, make corrections to the “primitive VTD faces” layer and re-perform the dissolve.
17. You now have your VTD coverage. Name this output shapefile RDP_<ssccc>_VTD_WholeEntity.* where the <ssccc> is the state and county FIPS code.

C. SLDL, SLDU, and CD Corrections Sample Methodology

1. The same methodology can be used to create SLDL, SLDU, and CD shapefiles for submitting corrections to those geographies to the Census Bureau. When submitting corrections to these geographies, remember they are only supposed to be changes to correct drafting errors. New plans or official changes should be coordinated through the Redistricting Data Office of the U.S. Census Bureau.

http://www.census.gov/rdo/about_the_program/009946.html)

2. SLDL, SLDU, and CD corrections should all get a CHNG_TYPE code of “B.”
3. In any returned SLDL, SLDU, or CD shapefile, only include the districts that have lost or gained area. If a district has not changed, it should not be included in the returned file. The naming of these returned files is covered in the “**Returned Files**” section on page 17.

D. Creation of the “Changed Lines” Coverage

1. Make a copy of the edges shapefile for you to edit. This will be referred to as the edges shapefile copy.
2. If it is necessary to add linear features, digitize them into the edges shapefile copy. Provide each feature with a CHNG_TYPE of “AL” and an

MTFCC. See Attachment I for a list of MTFCC codes. Names may also be provided at this time.

3. If it is necessary to delete Census provided linear features, attribute each feature in the edges shapefile copy you want deleted with a CHNG_TYPE of "DL." **Do not actually delete the line.** It needs to be marked with a code, but not deleted, in order for it to be removed from the MTDB.

- **Adding Block Boundary Suggestions**

4. Once completing steps 1 through 3, change the symbology of the edges shapefile copy to differentiate between:
 - 2010 Census planned tabulation block boundaries (CBBFLG = 4)
 - Ineligible as 2010 Census tabulation block boundaries (CBBFLG = 9)
 - No designation (CBBFLG = null).
5. Provide block boundary suggestions by selecting features and coding as follows:
 - Must holds: 2010_BBSP = 1 and CHNG_TYPE = CA
 - Do not holds: 2010_BBSP = 2 and CHNG_TYPE = CA
6. Once all block boundaries are suggested, select by attribute to select all lines that have a value in the CHNG_TYPE field. Export the selected set of edges as the returned lines shapefile called RDP_<ssccc>_LN_Changes.* where the <ssccc> is the state and county FIPS code.
7. Convert the polygon coverage (RDP_<ssccc>_VTD_WholeEntity.*) to a line file. This file is for temporary use so can be named accordingly.
8. Perform an Erase on this temporary line file using the original edges shapefile. This leaves just the new lines that were added during the RDP_<ssccc>_VTD_WholeEntity.* shapefile's creation.
9. Use the editing tools to add the remaining lines from the temporary lines file to the RDP_<ssccc>_LN_Changes.* shapefile making sure to keep the attribute fields from the RDP_<ssccc>_LN_Changes.* shapefile.
10. Attribute these lines with the appropriate MTFCC (P0001 if it's an invisible legal/statistical boundary) code and the CHNG_TYPE = AL. Once this is completed, the RDP_<ssccc>_LN_Changes.* shapefile is ready for submission.

E. Submitting Files Using the Census Bureau's "Send a File Utility"

You can upload your files through Census Bureau's **Send a File Utility** at: <http://www2.census.gov/cgi-bin/sendfile>. Or, you can go to the Census Bureau's home page at www.census.gov and select:

- Subjects A-Z
- Access Data Tools
- Public file send utility

This utility allows file size up to 500 Mb. Your file should be a .zip file containing all the relevant county files you want to submit. If you do not have a .zip utility, zip creation software is included on your first data disc as fbzpack.exe. The zipped file should be named RDP_**SS**CCC_Return.zip where the **SS** is your state's two-digit FIPS code and **CCC** is the county's FIPS code for the county you are submitting.

Use the following steps to FTP your files to us:

1. Under **Source Information (Local)**, click on the **Browse** button to navigate to the file that you wish to send. Select the file from the Choose file window by clicking on it. Click **Open**. The **File to Send** field now contains the file name. **Note:** You can send only one file at a time.
2. In the **Target Information (Remote)** section, enter **/geo/VTD_BBSP/ST##_SS** in the Directory to Receive File, where **##** = your state's two-digit FIPS code and **SS** = your state's two-letter USPS abbreviation.
Examples: if you are California, **##** = 06 and **SS** = CA; if you are Iowa, **##** = 19 and **SS** = IA. If you are not sure what your state FIPS code or your USPS state abbreviation is, please click on the following link: <http://www.itl.nist.gov/fipspubs/fip5-2.htm>
3. Do not make an entry for **New File Name**.
4. Under **Notify by E-mail**, type your e-mail address in the Sender's E-mail Address field. In the Census Bureau Employee's E-Mail Address field, enter **GEO.Redistricting.list@census.gov**.

We are asking you to please send a **separate** e-mail to the same e-mail address using your regular e-mail account, to notify us when you have submitted updates for your state.

5. Then type in the Verification Code that you see (or numbers you hear) in the box on the screen.
6. After filling in all the fields correctly, click on **Upload**. If you find an error, click on **Clear** and repeat the steps.

Important Note!! If you must resubmit a file for any reason, you **must first rename the file**. If not, the utility will produce an error message. Please retain the default naming convention of **RDP_sccc_Return** when you rename it. For example: RDP_42027_Return_revised.zip or RDP_42027_Return_2.zip.

We encourage you to call your RCC or headquarters staff (GEO or RDO) at anytime with any questions, comments, or concerns. Contact information can be found in **Section I. D.** of the **General Guidelines** for GEO and RDO staff, and in **Attachment C** for the RCC staff.

VI. Data Dictionary

Attribute Fields denoted by an asterix (*) are only present in the county level file and not the state level file.

Attribute Fields denoted in **bold** are the only fields that require updating for a returned shapefile, but all fields must be present and in order for a successful submission. (VTD, SLDL, SLDU, CD, and EDGES shapefiles)

-Alaska Native Regional Corporations (Alaska Only)-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
ANRCFP	5	String	FIPS ANRC Code (State Based)
ANRCCE	2	String	Current Census ANRC Code
NAMELSAD	100	String	Name with translated LSAD
LSAD	2	String	Legal/Statistical Area Description
AIANNHNS	8	String	ANSI numeric identifier for AIANNH Areas
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS55 class code describing entity
PARTFLG*	1	String	Part Flag Indicator
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
DOCU	120	String	Supporting documentation
FORM_ID	4	String	Record ID for any boundary update
AREA	10	Numeric (3 decimal places)	Acreage of area update
RELATE	120	String	Relationship description
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data

-Alaska Native Regional Corporations (Alaska Only)-			
AIANHFSR	1	String	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group.

-American Indian Areas – Legal -			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
AIANNHCE	4	String	Census AIANNH Code
COMPTYP	1	String	Indicates if reservation (or equivalent) or off-reservation trust land is present, or both
AIANHFSR	1	String	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group.
NAMELSAD	100	String	Name with translated LSAD
AIANNHNS	8	String	ANSI numeric identifier for AIANNH Areas
LSAD	2	String	Legal/Statistical Area Description
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS55 class code describing entity
PARTFLG*	1	String	Part Flag Indicator
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
DOCU	120	String	Supporting documentation
FORM_ID	4	String	Record ID for any boundary update
AREA	10	Numeric (3 decimal places)	Acreage of area update
RELATE	120	String	Relationship description
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data

-American Indian / Alaska Native Areas – Statistical-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
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 translated LSAD
AIANNHNS	8	String	ANSI numeric identifier for AIANNH Areas
LSAD	2	String	Legal/Statistical Area Description
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS55 class code describing entity
PARTFLG*	1	String	Part Flag Indicator
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
RELATE	120	String	Relationship description
VINTAGE	2	String	Vintage updated with returned data
NAME	100	String	Name

-American Indian Tribal Subdivisions - Legal-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
AIANNHCE	4	String	Census AIANNH Code
TRIBSUBCE	1	String	Census Tribal subdivision
NAMELSAD	100	String	Name with translated LSAD
AIANNHNS	8	String	ANSI numeric identifier for AIANNH Areas
LSAD	2	String	Legal/Statistical Area Description

-American Indian Tribal Subdivisions - Legal-			
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS55 class code describing entity
PARTFLG*	1	String	Part Flag Indicator
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
DOCU	120	String	Supporting documentation
FORM_ID	4	String	Record ID for any boundary update
AREA	10	Numeric (3 decimal places)	Acreage of area update
RELATE	120	String	Relationship description
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data
AIANNHFSR	1	String	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group.

-American Indian Tribal Subdivisions - Statistical-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
AIANNHCE	4	String	Census AIANNH Code
TRIBSUBCE	1	String	Census Tribal subdivision
NAMELSAD	100	String	Name with translated LSAD
AIANNHNS	8	String	ANSI numeric identifier for AIANNH Areas
LSAD	2	String	Legal/Statistical Area Description
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS55 class code describing entity

-American Indian Tribal Subdivisions - Statistical-			
PARTFLG*	1	String	Part Flag Indicator
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
DOCU	120	String	Supporting documentation
FORM_ID	4	String	Record ID for any boundary update
AREA	10	Numeric (3 decimal places)	Acreage of area update
RELATE	120	String	Relationship description
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data
AIANNHFSR	1	String	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group.

-Congressional Districts-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
CDFP	2	String	Congressional District Code
CDTYP	1	String	Congressional District Type
NAMELSAD	100	String	Name with translated LSAD
LSAD	2	String	Legal/Statistical Area Description
CHNG_TYPE	2	String	Type of Area Update
EFF_DATE	8	String	Effective date or vintage
NEW_CODE	2	String	New Congressional District Code
RELTYPE1	2	String	Relationship Type 1
RELTYPE2	2	String	Relationship Type 2
RELTYPE3	2	String	Relationship Type 3
RELTYPE4	2	String	Relationship Type 4

-Congressional Districts-			
RELTYPE5	2	String	Relationship Type 5
REL_ENT1	8	String	Relationship Entity 1
REL_ENT2	8	String	Relationship Entity 2
REL_ENT3	8	String	Relationship Entity 3
REL_ENT4	8	String	Relationship Entity 4
REL_ENT5	8	String	Relationship Entity 5
RELATE	120	String	Relationship Description
CDSESSN	3	String	Congressional District Session Code
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data
FUNCSTAT	1	String	Functional Status

-Hawaiian Home Lands (Hawaii Only)-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
AIANNHCE	4	String	Census AIANNH Code
COMPTYP	1	String	Indicates if reservation (or equivalent) or off-reservation trust land is present, or both
NAMELSAD	100	String	Name with translated LSAD
AIANNHNS	8	String	ANSI numeric identifier for AIANNH Areas
LSAD	2	String	Legal/Statistical Area Description
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS55 class code describing entity
PARTFLG*	1	String	Part Flag Indicator
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage

-Hawaiian Home Lands (Hawaii Only)-			
DOCU	120	String	Supporting documentation
FORM_ID	4	String	Record ID for any boundary update
AREA	10	Numeric (3 decimal places)	Acreage of area update
RELATE	120	String	Relationship description
VINTAGE	2	String	Vintage updated with returned data
AIANNHFSR	1	String	Flag indicating level of recognition of an American Indian, Alaska Native, or Native Hawaiian tribe or group.
NAME	100	String	Name

-School Districts (Elementary, Secondary, Unified)-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
SDLEA	5	String	Current Local Education Agency Code
NAME	100	String	Name of School District
LSAD	2	Integer	Legal/Statistical Area Description
HIGRADE	2	String	Highest grade for which the district is financially responsible
LOGRADE	2	String	Lowest grade for which the district is financially responsible
PARTFLG*	1	String	Part Flag Indicator
POLYID	4	String	Record ID for each update polygon for linking back to the submission log
CHNG_TYPE	1	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
RELATE	120	String	Relationship description
FUNCSTAT	3	String	Functional Status
VINTAGE	2	String	Vintage updated with returned data

-State Legislative Districts (Upper/Senate)-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
SLDUST	3	String	SLD Upper Chamber Code
NAMELSAD	100	String	Name with translated LSAD
LSAD	2	String	Legal/Statistical Area Description
PARTFLG*	1	String	Part Flag Indicator
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
NEW_NAME	100	String	New SLDU Name
NEW_CODE	3	String	New SLDU Code
RELTYPE1	2	String	Relationship Type 1
RELTYPE2	2	String	Relationship Type 2
RELTYPE3	2	String	Relationship Type 3
RELTYPE4	2	String	Relationship Type 4
RELTYPE5	2	String	Relationship Type 5
REL_ENT1	8	String	Relationship Entity 1
REL_ENT2	8	String	Relationship Entity 2
REL_ENT3	8	String	Relationship Entity 3
REL_ENT4	8	String	Relationship Entity 4
REL_ENT5	8	String	Relationship Entity 5
RELATE	120	String	Relationship Description
LSY	4	String	Legislative Session Year
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data
FUNCSTAT	1	String	Functional Status

-State Legislative Districts (Lower/Senate)-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
SLDLST	3	String	SLD Lower Chamber Code
NAMELSAD	100	String	Name with translated LSAD
LSAD	2	String	Legal/Statistical Area Description
PARTFLG*	1	String	Part Flag Indicator
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
NEW_NAME	100	String	New SLDL Name
NEW_CODE	3	String	New SLDL Code
RELTYPE1	2	String	Relationship Type 1
RELTYPE2	2	String	Relationship Type 2
RELTYPE3	2	String	Relationship Type 3
RELTYPE4	2	String	Relationship Type 4
RELTYPE5	2	String	Relationship Type 5
REL_ENT1	8	String	Relationship Entity 1
REL_ENT2	8	String	Relationship Entity 2
REL_ENT3	8	String	Relationship Entity 3
REL_ENT4	8	String	Relationship Entity 4
REL_ENT5	8	String	Relationship Entity 5
RELATE	120	String	Relationship Description
LSY	4	String	Legislative Session Year
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data
FUNCSTAT	1	String	Functional Status

-Urban Growth Areas (Washington Only)-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
UGACE	5	String	Urban Growth Area Code
UGATYP	1	String	Urban Growth Area Type
NAMELSAD	100	String	Name with translated LSAD
LSAD	2	String	Legal/Statistical Area Description
PARTFLG	1	String	Part Flag Indicator
CHNG_TYPE	1	String	Type of Area Update
EFF_DATE	8	String	Effective Date or Vintage
AREA	10	Double	Acreage of Update
RELATE	120	String	Relationship Description
VINTAGE	2	String	Vintage updated with returned data
NAME	100	String	Name

-Voting Districts – Census 2000-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP00	2	String	FIPS 2000 State Code
COUNTYFP00	3	String	FIPS 2000 County Code
VTDST00	6	String	Voting District Code
NAMELSAD	100	String	Name with translated LSAD
VTDI	1	String	Voting District Indicator
LSAD	2	String	Legal/Statistical Area Description
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
NEW_NAME	100	String	New VTD Name
NEW_CODE	6	String	New VTD Code

-Voting Districts – Census 2000-			
RELTYPE1	2	String	Relationship Type 1
RELTYPE2	2	String	Relationship Type 2
RELTYPE3	2	String	Relationship Type 3
RELTYPE4	2	String	Relationship Type 4
RELTYPE5	2	String	Relationship Type 5
REL_ENT1	8	String	Relationship Entity 1
REL_ENT2	8	String	Relationship Entity 2
REL_ENT3	8	String	Relationship Entity 3
REL_ENT4	8	String	Relationship Entity 4
REL_ENT5	8	String	Relationship Entity 5
RELATE	120	String	Relationship Description
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data
FUNCSTAT	1	String	Functional Status

-Census Block Groups-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
TRACTCE	6	String	Census Tract Code
BLKGRPCE	1	String	Block Group Code
BLKGRPID	12	String	FIPS State Code, FIPS County Code, Census Tract Code, Block Group Code
CHNG_TYPE	2	String	Type of Area Update
EFF_DATE	8	String	Effective Date or Vintage
BGTYP	1	String	Block Group Characteristic Flag
RELATE	120	String	Relationship Description
VINTAGE	2	String	Vintage updated with returned data

-Census Blocks – Current-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
STATEFP00	2	String	FIPS 2000 State Code
COUNTYFP00	3	String	FIPS 2000 County Code
TRACTCE00	6	String	Census Tract Code
BLOCKCE	4	String	Tabulation Block Number
SUFFIX1CE	2	String	Census Block Suffix 1
SUFFIX2CE	2	String	Census Block Suffix 2
BLOCKID	19	String	FIPS State Code, FIPS County Code, Census Tract Code, Tabulation Block Number, Census Block Suffix 1, Census Block Suffix 2

-Census Blocks – Census 2000-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP00	2	String	FIPS 2000 State Code
COUNTYFP00	3	String	FIPS 2000 County Code
TRACTCE00	6	String	Census Tract Code
BLOCKCE	4	String	Tabulation Block Number
BLOCKID00	15	String	FIPS State Code, FIPS County Code, Census Tract Code, Tabulation Block Number
PARTFLG	1	String	Part Flag Indicator
HOUSING00	9	Integer	2000 Housing
POP00	9	Integer	Census 2000 population count

-Census Tracts-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
TRACTCE	6	String	Census Tract Code
NAME	100	String	Name

-Census Tracts-			
TRACTID	11	String	FIPS State Code, FIPS County Code, Census Tract Code
CHNG_TYPE	2	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
TRACTTYP	1	String	Tract Characteristic Flag
RELATE	120	String	Relationship Description
TRACTLABEL	7	String	Tract number used for LUCA geocoding
VINTAGE	2	String	Vintage updated with returned data

-Census Designated Places-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
PLACEFP	5	String	FIPS 55 Place Code
PLACENS	5	String	ANSI feature code for the place
NAMELSAD	100	String	Name with translated LSAD
LSAD	2	String	Legal/Statistical Area Description
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS 55 Class Code describing an entity
PARTFLG	1	String	Part Flag Indicator
CHNG_TYPE	1	String	Type of Area Update
EFF_DATE	8	String	Effective Date or Vintage
RELATE	120	String	Relationship Description
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data

-Consolidated City Shapefile-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
CONCITYFP	5	String	FIPS 55 Place Code
CONCITYCE	4	String	Census Consolidated City Code
NAMELSAD	100	String	Name with translated LSAD
PLACENS	8	String	ANSI feature code for the place
LSAD	2	String	Legal/Statistical Area Description
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS 55 Class Code describing an entity
CHNG_TYPE	1	String	Type of Area Update
EFF_DATE	8	String	Effective Date or Vintage
DOCU	120	String	Supporting Documentation
FORM_ID	4	String	(MTPS and Web BAS only)
AREA	10	Double	Acreage of Update
RELATE	120	String	Relationship Description

-County and Equivalent Areas Shapefile-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
COUNTYNS	8	String	ANSI Feature Code for the County or Equivalent Feature
NAMELSAD	100	String	Name with translated LSAD code
LSAD	2	String	Legal/Statistical Area Description code

-County and Equivalent Areas Shapefile-			
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS 55 Class Code describing an entity
CHNG_TYPE	1	String	Type of area update
EFF_DATE	8	String	Effective Date or Vintage
DOCU	120	String	Supporting Documentation
FORM_ID	4	String	(MTPS / Web BAS only)
AREA	10	Double	Acreage of Area Update
RELATE	120	String	Relationship description

-County Subdivisions Shapefile – Legal (MCD)-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
COUSUBFP	5	String	FIPS County Subdivision Code
NAMELSAD	100	String	Name with translated LSAD
COUSUBNS	8	String	ANSI feature code for the county subdivision
LSAD	2	String	Legal/Statistical Area Description
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS 55 Class Code describing an entity
CHNG_TYPE	1	String	Type of Area Update
EFF_DATE	8	String	Effective Date or Vintage
DOCU	120	String	Supporting Documentation
FORM_ID	4	String	(MTPS and Web BAS only)
AREA	10	Double	Acreage of Update
RELATE	120	String	Relationship Description
NAME	100	String	Name

-County Subdivisions Shapefile – Legal (MCD)-			
VINTAGE	2	String	Vintage updated with returned data

-County Subdivisions Shapefile –Statistical (CCD)-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
COUSUBFP	5	String	FIPS County Subdivision Code
NAMELSAD	100	String	Name with translated LSAD
COUSUBNS	8	String	ANSI feature code for the county subdivision
LSAD	2	String	Legal/Statistical Area Description
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS 55 Class Code describing an entity
CHNG_TYPE	1	String	Type of Area Update
RELATE	120	String	Relationship Description
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data

-Incorporated Place Shapefile-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP*	3	String	FIPS County Code
PLACEFP	5	String	FIPS 55 Place Code
NAMELSAD	100	String	Name with translated LSAD
PLACENS	8	String	ANSI feature code for the place
LSAD	2	String	Legal/Statistical Area Description
FUNCSTAT	1	String	Functional Status
CLASSFP	2	String	FIPS 55 Class Code describing an entity

-Incorporated Place Shapefile-			
PARTFLG	1	String	Part Flag Indicator
CHNG_TYPE	1	String	Type of Area Update
EFF_DATE	8	String	Effective Date or Vintage
DOCU	120	String	Supporting Documentation
FORM_ID	4	String	(MTPS and Web BAS only)
AREA	10	Double	Acreage of Update
RELATE	120	String	Relationship Description
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data

-States and Equivalent Areas-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
STATEUSPS	3	String	USPS State Abbreviation
NAME	10	Integer	Name
LSAD	5	String	Legal/Statistical Area Description
STATENS	120	String	ANSI feature code for the state

-Subbarrios-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
COUSUBFP	5	String	FIPS County Subdivision Code
SUBMCDFP	5	String	FIPS Sub-minor Civil Division Code
NAMELSAD	100	String	Name with translated LSAD

-Subbarrios-			
SUBMCDNS	8	String	ANSI feature code for the sub-minor civil division
LSAD	2	String	Legal/Statistical Area Description
CHNG_TYPE	1	String	Type of Area Update
EFF_DATE	8	String	Effective Date or Vintage
AREA	10	Double	Acreage of Update
RELATE	120	String	Relationship Description
FORM_ID	4	String	(MTPS and Web BAS only)
NAME	100	String	Name
VINTAGE	2	String	Vintage updated with returned data
FUNCSTAT	1	String	Functional Status

-Edges (All Lines) Shapefile-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	State FIPS Code
COUNTYFP	3	String	County FIPS Code
TLID	10	Integer	Permanent Edge ID
TFIDL	10	Integer	Permanent Face ID (Left)
TFIDR	10	Integer	Permanent Face ID (Right)
MTFCC	5	String	MAF/TIGER Feature Class Code
FIDELITY	1	String	Indication to a respondent when their entity boundary has changed through spatial enhancement
FULLNAME	120	String	Prefix qualifier code, prefix direction code, prefix type code, base name, suffix type code, suffix qualifier code
SMID	22	String	Spatial Tmeta ID
BBSPFLG	1	String	Redistricting data project participant's submitted request of an EDGE for selection as a block boundary
CBBFLG	1	String	Indicates the status of an EDGE for a selection as a block boundary
2010_BBSP	1	String	New BBSP flag

-Edges (All Lines) Shapefile-			
CHNG_TYPE	2	String	Type of linear update
LTOADD	10	String	Left To Address
RTOADD	10	String	Right To Address
LFROMADD	10	String	Left From Address
RFROMADD	10	String	Right From Address
ZIPL	5	String	Left Zip Code
ZIPR	5	String	Right Zip Code

-Area Landmark Shapefile-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
MTFCC	5	String	MAF/TIGER Feature Class Code
FULLNAME	120	String	Prefix direction code, prefix type code, base name, suffix type code, suffix direction code
AREAID	10	Integer	Landmark identification number
ANSICODE	8	String	ANSI code for area landmarks
CHNG_TYPE	1	String	Type of Area Landmark update
EFF_DATE	8	String	Effective Date or Vintage
RELATE	120	String	Relationship description
BAG	3	String	Block Area Grouping

-Hydrography Area Shapefile-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code

-Hydrography Area Shapefile-			
ANSICODE	8	String	ANSI code for hydrography area
MTFCC	5	String	MAF/TIGER Feature Class Code
FULLNAME	120	String	Prefix direction code, prefix type code, base name, suffix type, suffix type code, suffix direction code
CHNG_TYPE	1	String	Type of Area Update
HYDROID	10	String	Hydrography Identification Number

-Point Landmarks Shapefile-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
POINTID	10	Integer	Point Landmark Identification Number
MTFCC	5	String	MAF/TIGER Feature Class Code
FULLNAME	120	String	Prefix type code, base name, suffix type code
CHNG_TYPE	1	String	Type of Area Update

-Topological Faces – Geographic Entity Relationships Table-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
TFID	20	Integer	Permanent Face ID
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
TRIBSUBCE	3	String	Census Tribal Subdivision
TTRACTCE	6	String	Tribal Census Tract Code
TBLKGRPCE	1	String	Tribal Census Block Group Code
AIANNHCE	4	String	Census AIANNH Code
COMPTYP	1	String	Indicates if reservation (or equivalent) or off-reservation trust land is present, or both
ANRCCE	5	String	FIPS ANRC Code
SLDUST	3	String	SLD Upper Chamber Code

-Topological Faces – Geographic Entity Relationships Table-			
SLDLST	3	String	SLD Lower Chamber Code
ELSD	5	String	Current ELSD Local Education Agency (LEA) Code
SCSD	5	String	Current SCSD Local Education Agency (LEA) Code
UNSD	5	String	Current UNSD Local Education Agency (LEA) Code
CDFP	2	String	Congressional District Code
TRACTCE	6	String	Census Tract Code
UACE	5	String	Census Urban Area Code
BLKGRPCE	1	String	Census Block Group Code
BLOCKCE	4	String	Tabulation Block Number
SUFFIX1CE	2	String	Census Block Suffix 1
SUFFIX2CE	2	String	Census Block Suffix 2
TAZCE	6	String	Traffic Analysis Zone Code
SUBMCDFP	5	String	FIPS 55 Sub-minor Civil Division Code
UGACE	5	String	Urban Growth Area Code
VTDST00	6	String	2000 Voting District Code
STATEFP00	2	String	FIPS 2000 State Code
COUNTYFP00	3	String	FIPS 2000 County Code
TRACTCE00	6	String	Census 2000 Tract Code
PLACEFP	5	String	FIPS 55 Place Code
COUSUBFP	5	String	FIPS 55 County Subdivision Code
CONCITYFP	5	String	FIPS 55 Place Code
LWFLG	1	String	Land/Water Flag

-Topological Faces – Area Landmark Relationships Table-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
TFID	20	Integer	Permanent Face ID
AREAID	22	Integer	Object ID

-Topological Faces – Hydrography Area Relationships Table-			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
TFID	20	Integer	Permanent Face ID
HYDROID	22	Integer	Object ID

-Address Ranges Table -			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
TLID	22	Integer	TIGER Line ID
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
FROMHN	12	String	From House Number
TOHN	12	String	To House Number
SIDE	1	String	Side Indicator Flag
ZIP	5	String	5-digit ZIP Code
PLUS4	4	String	ZIP+4 Code
LFROMADD	10	String	Left From Address
LTOADD	10	String	Left To Address
RFROMADD	10	String	Right From Address
RTOADD	10	String	Right To Address
ZIPL	5	String	Left 5-digit ZIP Code
ZIPR	5	String	Right 5-digit ZIP Code
ZIP4L	4	String	Left ZIP+4 Code
ZIP4R	4	String	Right ZIP+4 Code

-Linear Feature Names Table -			
<u>ATTRIBUTE FIELD</u>	<u>LENGTH</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
OID	22	Integer	Object ID
STATEFP	2	String	FIPS State Code
COUNTYFP	3	String	FIPS County Code
NAME	100	String	Name
PREDIR	2	String	Prefix Direction code component of feature name
PRETYP	3	String	Prefix Type code component of feature name
PREQUAL	2	String	Prefix Qualifier code component of feature name
SUFDIR	2	String	Suffix Direction code component of feature name
SUFTYP	3	String	Suffix Type code component of feature name
SUFQUAL	2	String	Suffix Qualifier code component of feature name
MTFCC	5	String	MAF/TIGER Feature Class Code
PAFLAG	1	String	Primary/Alternate flag