# BRAZORIA COUNTY APPRAISAL DISTRICT

## GIS CARTOGRAPHIC STANDARDS MANUAL





# DOCUMENT MAINTENANCE HISTORY

DATE	EDITOR	REASON
3/23/2015	GIS Supervisor	Original Document Drafted
6/26/2015	GIS Supervisor	Document Completed
6/26/2015	GIS Department	Revised and Edited
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## 1) INTRODUCTION

The GIS department creates and maintains many GIS layers for the Brazoria County Appraisal District. These layers are used in house to create GIS digital and hardcopy maps for the public, other government offices, and also for the appraisers that work for BCAD.

As the demand for accurate and timely GIS data has grown, so has the need to form a document which would help to standardize the information which the GIS department supplies to its customers. Standardization helps to minimize the potential for varying levels of service from the department, while also creating a visual style that customers can become accustomed to expect from the department.

The GIS department currently consists of:

Joshua Ashburn: GIS Supervisor, Editor

Missie Owens: GIS Technician, Editor

With assistance from: Zachary Ashburn: Editor, Web Technician

As of January 2015 BCAD's GIS editors maintain over 250,000 polygons, and perform over 1,000 GIS edits/updates per month.

## 2) <u>PURPOSE</u>

The maintenance of such volumes of data creates the need for organization. In order to provide exceptional service to the public, as well as superior networking between other government offices, the GIS department has developed a standardized map set for all maps created by our office. This will help to cultivate a visual appeal to our maps and will help develop BCAD's GIS product.

It will help to create a mindset of BCAD maps as a visual brand that is as recognizable as it is reliable. If the public can more easily recognize the products that we create they can develop a familiarity with them as a trusted source. GIS and Cartographic standardization can aid in other aspects, such as:

- Ensuring that equal and uniform levels of professionalism are used to develop every product that leaves our office and enters the public eye. (i.e. .PDF maps, GIS Layers, .JPEG maps, Web downloads, etc.)
- ✓ Helping to make our maps easy to interpret by our customers. They can become accustomed to our visual sense and thus may more easily utilize our maps.
- ✓ Allowing the GIS Department to create a set of rigid mapping features that can be utilized for all maps, which will save time and create a more fluid workflow.
- Allowing all current and future editors to have an inherited working structure that is both transparent and logical in its build. This will allow for ease of training, increase in speed for work, and also minimize duplication of work.
- ✓ Allows all employees the ability to familiarize themselves with the maps/documents that are being produced so that they can answer questions / troubleshoot for the public and utilize the maps for their own work.

## 3) MANUAL GLOSSARY

**Aerial Imagery:** Photographs of the ground taken from an elevated position. Most commonly these are taken from an aircraft or satellite.

**Agency Name:** The BCAD GIS department produces maps strictly for BCAD, its endeavors, and the public which it serves. All maps produced by the GIS Department will be BCAD maps.

**ArcMap:** ArcMap is the program by which most of the GIS maps are produced. It is software developed and distributed by the ESRI Company.

**Attributes:** Attributes are data characteristics within a specific GIS layer. They are used to identify the specific elements that the layer is visualizing. Common Attributes include Name, ID number, Description, Comments, etc. A full list of Attributes and their descriptions can be found in section 6 of this Manual.

**Author:** The Author of a map is the person who constructed that specific mapping document. The name and contact information for the Author should be located in the "Questions" line of the disclaimer.

**Date:** The date can refer to the date of the aerial imagery within the map or the date that the map itself was constructed depending on its position within the map and the color of the text.

**Disclaimer:** The mapping Disclaimer is the statement required by the State Comptroller's office which discloses that the data and information within the map is not certified to be entirely accurate, it is the best attempt at accuracy, it is subject to change without notice, it is being produce merely as reference material and is not held to the same standards as Survey data, legal documents, and professional certifications such as title claims, it is held without warrant. The disclaimer is typically located on the bottom of a map and is a required feature of every map produced for the public.

**ESRI:** Is a geographic information system company, which produces GIS software. ESRI stands for Environmental Systems Research Institute.

**Font:** This is in reference to the various fonts described within this manual. A font is a specified style of text. Some fonts are required for formatting and standardization of elements.

**Geographic ID:** The Geographic Identification number, commonly referred to as the GEO ID, is an eleven digit number that acts as a partial geo-code reference or GEO tag. The GEO ID is structured as follows:

#### 0000-0000-000

The account number structure is used to distinguish and group properties by their relative Geographical location within the county. The first four numbers almost always refers to the abstract or unique subdivision code that the property belongs to. For instance, properties located in Abstract 1 begin with the account string 0001-xxxx-xxx. Accounts within a certain subdivision such as Sherwood Forest Subdivision in Clute (S7567) would begin with 7567-xxxx-xxx.

The second set of numbers usually pertains to a block or lot within the legal description. For instance in a subdivision which has four blocks with repeating numbers in each, the account numbers may be grouped as follows:

XXXX-0001-001 XXXX-0001-002 XXXX-0002-001 XXXX-0002-002 And so on...

The last set of numbers is left to the unique structure of the subdivision or abstract. It can be utilized to finish out the legal description as in the example above, or it can be (and in many cases is) reserved for future splits and subdivisions of the parent account. For instance,

If a ten acre tract is on account number XXXX-0001-000 and pertains to Tract 1. Future splits may appear as such:

XXXX-0001-001, Tract 1A

XXXX-0001-002, Tract 1B

And so on...

**Guideline:** Guidelines are rules that occur at times on maps, but are not always required as part of the standard. They provide recommendations for certain occurrences with regard to formatting and placement of objects. They assist the mappers, by providing a common rule of thumb to follow.

**Layers:** Layers are the way that GIS data is viewed within a data frame. The layers are in a sense 'stacked' on top of one another with the bottom layers being covered by the top layers. When several layers are visible within a map, there is a need for standardization and formatting in order to ensure that all layers are viewable and the map is tailored for optimal efficiency and usefulness

**Legend:** A Legend displays the visual elements of a map or data frame and what they pertain to. The legend is not a required feature on every map, and is generally reserved for more complex maps, or maps needing clarification.

**Logo:** The BCAD logo is a required element on every map that is produced for the general public. It is located in the bottom right corner of the map.

**Map Border:** The map border is provided to separate the data window of the map and the additional descriptive elements such as north arrow, title and disclaimer. It is a black 2point bar with rounded edges surrounding the mapping window.

**Map Status:** The map status is a Disclaimer which is put on a map if the map is produced in any condition other than finished. If a map status is not visible, the map is thought to be a finished product and is current as of the date it is being produced. If the elements of the map are not a finished product, such as a subdivision that has not

completely been entered, or attributes that are not complete. The terms, "Draft" "Preliminary Map" "For Official Use Only" or "For Internal Staff Use Only" are examples of mapping status other than finished maps.

**North Arrow:** The north arrow is a bearing tool for reference as to which direction the map is oriented. The north arrow is a required element to the map.

**Oblique Imagery:** Oblique imagery is aerial imagery taken of a property from an angle (typically close to 40-45 degrees). Although orthogonal imagery is more common on maps generated by the GIS department, maps may also contain oblique imagery. No additional notations or disclaimers are necessary when producing a map with oblique imagery. Sometimes it may be useful to put a caption that discloses from what direction the image was taken.

**Orthogonal:** Orthogonal imagery is aerial imagery typically taken from overtop of a property. It is commonly referred to as "Bird's Eye" or "Top Down" imagery. It is the most common aerial imagery utilized by BCAD employees.

**Paper Size:** All elements of a map should be scaled to a size that is relevant to the paper size that the map is to be printed on. Also the orientation of the map on the paper will require different scaling of the required mapping elements. In all cases the required elements need to be present and to a scale that is legible. Within the office BCAD employees can produce maps on letter, legal, and tabloid (11x17) size paper. BCAD employees also have access to the large format printer utilized by the GIS department. Common sizes produced by this printer are 20x24, 18x24, and 24x36. There are varying costs associated with the different sizes of maps when printed for the public. All maps should be viewed in the "Layout" view before being printed to ensure that all necessary information is on the map and that all elements are scaled appropriately.

**Pictometry:** The Brazoria County Appraisal District is currently under contract with the Pictometry International Corporation which provides all aerial imagery utilized by BCAD. Pictometry is the name of a patented aerial image capture process that produces imagery showing the fronts and sides of buildings and locations on the ground. Images are captured by low-flying airplanes, depicting up to 12 oblique perspectives (shot from a 40 degree angle) as well as an orthogonal (overhead) view of every location flown. These perspectives can then be stitched together to create composite aerial maps that seamlessly span many miles of terrain. Because they are taken from an angle, the pixels associated with Pictometry images are trapezoidal, rather than rectangular. This necessitates special software and algorithms to accurately determine objects' size and position on the maps. Pictometry imagery can be overlaid with various shapefiles and GIS information because every pixel is georeferenced to its exact location on the earth. This allows Pictometry imagery to be integrated into many existing GIS software applications for use in many businesses, while creating a much richer database of the real world. Measurements that can be made directly on Pictometry imagery include area, distance, height, elevation, pitch, and bearing, among others. Pictometry imagery is used by federal, state and local governments for emergency response/9-1-1, GIS, planning and development, and assessment. Commercial industries including insurance, construction, utilities, and real estate utilize such imagery to streamline business activities

**Property ID:** This is a six digit number that is generated sequentially as accounts are keyed into the PACS appraisal system at BCAD. This is what used to be referred to as the 'R' number. Today it is commonly referred to as the PID and is used primarily as a quick access account number.

**Requirement:** A requirement is an element that is necessary to be placed on every map produced for the public, or produced as a finished product. It is required in order to maintain both the standard visual concept of BCAD maps and also the standardized quality of BCAD maps.

**Revision:** A revision is a change to either the wording within the manual or a change to the standards of GIS Cartography within the department. All revisions should be notated at the beginning of the manual. Any major revisions will be submitted to the Chief Appraiser for approval.

**Scale Bar:** A scale bar shows the relative scale of elements and layers viewable in the data window. It is a useful tool that is required in most cases.

**Shapefile:** A Shapefile is a digital storage format for storing geometric locations of elements and their associated attribute data information. It is the format most common to the GIS department data. It is also the format for any raw GIS data published by BCAD's GIS department that is available to the public for download.

**Taxing Entity Boundary:** Most shapefiles produced by the District are depictions of the taxing boundaries of given entities located in Brazoria County. Taxing entities are the governing bodies which have the ability to set tax rates and levy taxes within the county. The boundaries display the limits of taxation of a certain entity. This information is utilized to determine which properties fall within certain boundaries.

**Title:** The title of a map is a required element which briefly describes what the map is depicting or what the map was generated for.

**Vicinity Map:** A vicinity map is a map within the standard viewing window which depicts the relative section of the county that the primary map is depicting. This is not a required feature of the maps produced by BCAD's GIS department. Due to the fact that most maps produced for customers are of property that the customer is already somewhat knowledgeable of, the vicinity map is not always a useful element and therefore is left to the individual mapper's discretion as to whether it is needed.

# 4) GIS CARTOGRAPHIC STANDARDS MANUAL

Category:	Section:	Req. Y/N	Last Revised	Description	Additional Notation
	A-1 : Logo	Y	6/24/2015	The BCAD logo should be present on all maps generated for public use. In almost all cases it should be used on all maps produced by the GIS Department. It should be added as a picture and scaled to a size that is appropriate for the map.	
	A-2 : Disclaimer	Y	6/24/2015	The Disclaimer should be added to all maps produced within the GIS department. It should be scaled to an appropriate size in relation to other mapping elements. Typically to take up as much vertical space as the Logo.	"Disclaimer: This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on the ground survey and represents only the approximate relative location of property boundaries."
1	A-3 : Title	Y	6/24/2015	If possible, Every map should have some form of Title	Titles should be in Bold and no smaller than 10pt. Font
A) General Elements	A-4 : North Arrow	Y	6/24/2015	The north arrow to be used is "ESRI North 7", Unless there is not sufficient space and then "ESRI North 5" should be used	N SESRI North 7 ESRI North 5
	A-5 : Scale Bar	Y	6/24/2015	The Scale Bar is a required element; It should be located somewhere under the mapping window that it pertains to. In all cases "Scale Line 2" should be used. The measurements should be adjusted to fit the scale range of the map. The two units of measurement that are acceptable are feet and miles. It is the mappers discretion as to which is appropriate.	0 50 100 200 Miles 
	A-6 : Date	N	6/24/2015	If a date is needed to clarify elements on a map. The date form should be MM/DD/YYYY. See Section "D" for specific information pertaining to dates.	6/24/2015
	A-7 : Author Info	Y	6/24/2015	Author info is a required element. It ensures that the public knows who to contact in case a question arises.	Questions: Joshua Ashburn - (979) 849-7792 - <u>iashburn@brazoriacad.org</u>

Category:	Section:	Req. Y/N	Last Revised	Description	Additional Notation
	A-8 : Legend	N	6/24/2015	Legends are used to further clarify the data being seen. They should be scaled appropriately and placed so as not to cover important elements within the mapping window. The legend should have a 2pt black border with a white background color. Layers that are not visible in the data window should not be displayed in the legend. Also basemap layers, geocoded raster data, and aerial tiles do not need to be in the legend.	Legend ROADS City_Limits PARCELS
	A-9 : Map Border	Y	6/24/2015	The Map Border is used to separate the elements of the mapping window with any additional elements of the map. The map border should be a 2pt black single line border, with 5% rounding to the corners.	
A) General Elements	A-10 : Vicinity Map	N	6/24/2015	Vicinity maps should be used when it is necessary to show what part of the county is being depicted. It is left to the discretion of the mapper as to whether the vicinity map is necessary. The common method of inserting a vicinity map is to create a clone mapping window that is resized to fit 1/10 of the mapping window and placed in the upper right corner of the mapping window.	
	A-11 : Map Status	N	6/24/2015	Map status is not a required element, however, if no map status is displayed, the map is assumed to be a final copy and assumed to contain only data that could be released to the public. For additional information on Map Status see Section "E"	
	A-12 :Final Format	Y	6/24/2015	A final check of all formatting is a required step in finishing any map. A map should be viewed in "Layout View" and checked for all necessary information. Also it should be ensured that the map is set to print on the appropriate paper size and that all mapping elements have been scaled accordingly.	

Category:	Section:	Req. Y/N	Last Revised	Description	Additional Notation
	B-1 : Fonts	Y	6/24/2015	All elements of the map should be formatted in one of the following fonts: Arial, Segoe UI Semi bold, Lucida Bright, or Verdana. Although use of different fonts to differentiate mapping elements is acceptable, changes in symbology and formatting are more reliable ways to distinguish data.	
	B-2 : Colors	N	6/24/2015	All fonts should be set to a gray or black color. This applies to mapping elements outside the mapping window and labeling within the GIS layers.	Three exceptions apply: 1) fonts that pertain to specific data that requires special labeling or referencing (i.e. Pictometry Image Dates) 2) text that is incorporated into a hyperlink or other linking feature 3) Unique text that has been placed at the customer's request to further distinguish different elements.
	B-3 : Page Orientation	Y	6/24/2015	Page orientation can be changed depending on the elements being viewed within the mapping window.	
B) Fonts, Colors and Formatting	B-4 : Layout Template	N	6/24/2015	The most appropriate layout template should be used if possible. Several layout templates have been generated to meet all requirements of the standardization manual. This helps to increase speed and efficiency in the office.	
	B-5 : Bold, Italics, Underline	N	6/24/2015	The use of Bold, Italics, and Underline should be used in limited fashion and only if appropriate. In most cases they are not needed.	
	B-6 : Scaling of Elements	Y	6/24/2015	All elements of the map should be scaled in relation to the mapping window in order to maximize the size of the mapping window and optimize the map.	
	B-7 : The Data Window	Y	6/24/2015	The data or mapping window should have a 2pt, single line border with 5% rounding at the corners. It should be arranged on the map as a central element and should be the largest element of the map.	One exception applies: 1) If the map is secondary to a chart, graph, photograph or other necessary data being analyzed then it should be scaled smaller and treated as a secondary element.



Category:	Section:	Req. Y/N	Last Revised	Description	Additional Notation
	C-1 : Visualization	Y	6/24/2015	Visualization of mapping layers should be formatted to maximize the viewable data (i.e. layers not covering other layers, and labels scaled appropriately to the layer they correspond to.)	
	C-2 : Ordering	Y	6/24/2015	Ordering of layers in the table of contents affects how they are viewed in the mapping window. Layers should be ordered in such a way that maximizes visible data and/or optimizes data being analyzed.	
C) Order of Mapping Layers	C-3 : Use of Transparency	N	6/24/2015	Use of transparency is a good way to visualize layers stacked on top of other layers without fully covering them. It also is useful when creating a map with a basemap layer such as aerial data that needs to be seen through all layers.	
	C-4 : Use of Masking	N	6/24/2015	Masking should be used when text is displayed over an aerial or dark shaded GIS Layer. Only a 1pt mask should be used and the mask should always be white.	
	C-5 : Differentiation	Y	6/24/2015	Layers generally should not be symbolized the same as any other layer. Special attention should be given to symbology when the map is to be printed in black and white because many colors print in similar variations of gray. Care needs to be taken to ensure these layers can still be differentiated on the printed map.	
i.	D-1: Date Format	Y	6/24/2015	Date format of all dates should be	6/24/2015
D) Date	D-2: Map Date	N	6/24/2015	A map date should be given if the data within the mapping window is date sensitive, or if it is to be compared to other dated maps. The map date should be located at the bottom of the map, outside the mapping window.	
	D-3: Image Date	N	6/24/2015	An image date should be placed when the image being viewed is date sensitive. The image date should be in yellow or white font and should be in the bottom right hand corner of the mapping window.	

Category:	Section:	Req. Y/N	Last Revised	Description	Additional Notation
D) Date	D-4: Date Range	N	6/24/2015	A date range should be given if the map will be deemed obsolete after a certain date moving forward (i.e. Current parcels 6/24/2015 to 7/24/2015), or if the data being presented is of historical reference of a past range (i.e. Circa 1/1/1999 to 1/1/2000)	
	[	1			
	E-1: "Draft" Status	N	6/24/2015	A map should be designated as a "Draft" if it is being submitted for final review and approval.	"Draft" should be included in the Title or placed near the title in similarly styled text
	E-2: "For Internal Staff Use Only" Status	N	6/24/2015	A map should be designated as being "For Internal Staff Use Only" if it contains information that would not be deemed public information. (i.e. contains property owner phone numbers in the labeling, or contains sales data that could be confidential)	One of the following phrases should be used: "For Internal Staff Use Only", "Not for Public Use", or "This Map Contains Confidential Information" should be placed in the Title or near the title in similarly styled text.
E) Map Status 'cont.'	E-3: "Preliminary" Status	N	6/24/2015	A map should be designated as being "Preliminary" if it is known that the data contained in the map is subject to change in the near future. (I.e. "Preliminary Map of Values in Jones Creek" if it contains preliminary values for the year.)	"Preliminary" should be included in the Title or placed near the title in similarly styled text
	E-4: "Historical Reference" Status	N	6/24/2015	A map should be designated as being for "Historical Reference" if the data contained in the map is purposely out of date or historical in nature. (i.e. e. a map containing an aerial from 2001 for reference, or a map containing values from 2010)	"For Historical Reference" should be included in the Title or placed near the title in similarly styled text
	E-5: Formatting and Positioning	N	6/24/2015	If a map contains a specified status, the status disclaimer should be in black font, and no smaller than the Title of the map. It can be italicized or underlined if needed.	
F) Paper Size	F-1 Sizes of Paper Used	Y	6/24/2015	Optimally if a map can be kept in a digital format, this is the preferred method of transfer to the customer. With this option there is generally no cost to the customer and no loss to resolution or formatting on the map. If a print is needed of the map, there are a number of paper sizes available.	Letter (8.5x11), Legal (8.5x14), Tabloid (11x17), and Roll Stock Paper that can be printed as wide as 36". If using roll stock a mapper should generally use one of the following sizes: 18x24, 20x24, 24x36

## **5) SAMPLE MAPS**





## 6) GIS LAYER ATTRIBUTE GLOSSARY

This section details the attributes found in most of the layers that the Brazoria County Appraisal District generates and offers to the public. Only the attributes with data significance are explained. Some layers contain additional fields, but these are either randomly generated fields during goeprocessing, or they contain obsolete information that BCAD no longer maintains.

## **ABSTRACTS:**

OBJECTID- The Object ID is a numeric value sequentially generated as new polygons/lines are added to a layer. It can sometimes be used as a semi-unique attribute for identification purposes. It is not maintained to the degree of accuracy and confidence as the PID attribute of a layer.

NAME- This is the numeric value name of the abstract.

LABEL- This is the primary label field for the abstract layer.

SECTION- This is the historic survey section number for the abstract, if known.

SURVEY- The survey field contains the primary survey name of the abstract.

SURVEY ALI- The survey alias field contains the survey alias name of the abstract, which is sometimes a shortened or elongated name, and sometimes an alternate survey name.

SHAPE AREA- Displays the calculated area of the given abstract presented in sqft units of measure.

DOC REF- This field gives any type of document reference that has been found for the specific abstract or survey.

FILE DATE- Filing date (if known) of the selected abstract.

#### **BLOCKS:**

OBJECTID: Numeric value sequentially generated as new polygons/lines are added to a layer. It can sometimes be used as a semi-unique attribute for identification purposes. It is not maintained to the degree of accuracy and confidence as the PID attribute of a layer.

NAME: Name of the block as recorded on the subdivision or survey plat.

SUBDIVISION: Subdivision name that the block originates from.

PLAT: Plat number of the subdivision that created selected block.

EDITOR: Last editor of the selected block.

DATE MOD: Last date that the block was modified.

## **<u>CITY:</u>**

OBJECTID: Numeric value sequentially generated as new polygons/lines are added to a layer. It can sometimes be used as a semi-unique attribute for identification purposes. It is not maintained to the degree of accuracy and confidence as the PID attribute of a layer.

NAME: Name of the city which polygon is part of.

TYPE: Attribute designating whether a polygon is part of the primary city limits or is a secondary portion. (i.e. buffer zone)

COLOR: Numeric value attribute for automated color selection if put into a GIS program.

DESCRIPTIO: Description of the polygon, mostly gives acreage, ordinance number and document number.

## **DRAINAGE DISTRICTS:**

OBJECTID: Numeric value sequentially generated as new polygons/lines are added to a layer. It can sometimes be used as a semi-unique attribute for identification purposes. It is not maintained to the degree of accuracy and confidence as the PID attribute of a layer.

NAME: Name of drainage district.

DISTRICT: Number for the district.

SUBDISTRIC: Discloses how many sub districts there are within the drainage district.

#### **IMPROVEMENT FOOTPRINTS:**

OBJECTID: Numeric value sequentially generated as new polygons/lines are added to a layer. It can sometimes be used as a semi-unique attribute for identification purposes. It is not maintained to the degree of accuracy and confidence as the PID attribute of a layer.

PID: Displays the PID that the improvement belongs to if it has been keyed.

AREA: Displays the calculated sqft area of an improvement.

POPUPINFO: Information that can be entered and programed to pop-up when polygon is hovered over in some GIS programs.

EDITOR: This displays the most recent editor for that improvement footprint polygon.

X COORD: Displays the x coordinate of the center of the improvement. This is given in decimal degrees.

Y COORD: Displays the y coordinate of the center of the improvement. This is given in decimal degrees.

DATE MOD: Displays the most recent date that the improvement was changed or updated.

## **PARCELS:**

NAME: Tract name, if any, of the polygon.

OBJECTID: Numeric value sequentially generated as new polygons/lines are added to a layer. It can sometimes be used as a semi-unique attribute for identification purposes. It is not maintained to the degree of accuracy and confidence as the PID attribute of a layer.

LEGAL TYPE: Lists whether the tract is considered a lot, block, reserve, or tract.

COMMENTS: This field contains general comments regarding the tract, sometimes contains other tracts or accounts associated with this tract or additional document referencing. Also, sometimes contains parent account information.

SUBTYPECOD: Numeric value attribute which discloses what type of tract the polygon is considered: 0 = Tract or lot in a filed subdivision 1 = tract in an abstract 2 = road, row or easement 3 = waterway / waterbody 4 = pipeline / drainage easement / unimproved roadway / general easement 5 = government 6 = beach 7 = park / greenway / common area – park 8 = jetties 9 = land or tract not carried in county / links to another county 10 = exempt land / levees.

LEGALDESCR: Contains the legal description of the polygon as per the tax role.

PID: Unique feature for the parcel layer. Numeric sequential value that is generated when tract is created as part of the tax records, primary distinguishing number used to identify accounts that a tract belongs to.

ACREAGE: Calculated acreage of the tract as it is drawn in GIS.

SQFT: Calculated square footage of the tract as it is drawn in GIS.

PERIMETER: Calculated perimeter in feet of the tract as it is drawn in GIS.

X COORD: Displays the x coordinate of the center of the tract. This is given in decimal degrees.

Y COORD: Displays the y coordinate of the center of the tract. This is given in decimal degrees.

EDITOR: Displays the most recent editor of the tract.

DATE MOD: Contains the date that the tract was most recently edited.

DOCUMENT 1: This field contains any volume and page or document referencing for the tract.

CREATE EDT: Displays the editor who created the tract in GIS. (after March 2015)

CREATEDATE: Displays the date the tract was created in GIS. (after March 2015)

GEO ID: (simple geo) The unique account number for each individual account. The same account can correspond to multiple tracts though. It is an eleven digit number used by the Appraisal District and the Tax Office.

ST CD: Displays the state code of the account which signifies the general usage of the property. A complete list of state codes is available to download on the BCAD website.

OWNER: Given owner of the account that the tract is associated with. This is the owner name as it appears on the tax records.

ML 1: Mailing address information for the owner. (Line 1)

ML 2: Mailing address information for the owner. (Line 2)

ML 3: Mailing address information for the owner. (Line 3)

ML CTY: Mailing address information for the owner. (City)

ML ST: Mailing address information for the owner. (State)

ML ZIP: Mailing address information for the owner. (Zip Code)

ASSD V: The assessed value of the account as a whole, not always for individual tracts.

NBHD: The assigned neighborhood of the property. This does not always correspond to the subdivision or city the property is in.

AB SD CD: The code for the abstract or subdivision that the property exists in.

IMPHSVL: The value of the "homesteadable" improvements on the account.

IMPNHSVL: The value of the "non-homesteadable" improvements on the account.

LNDHSVL: The value of the "homesteadable" land on the account.

LNDNHSVL: The value of the "non-homesteadable" land on the account.

AGMKT: The market value of the land falling under the agriculture special valuation.

AGUSE: The usage value as determined by the state of land falling under the agriculture special valuation.

MKTVL: The determined market value of the property.

APPRVL: The total appraised value of the property.

LNDUNT: The Land unit number used by appraisers to compare land values.

IMPUNT: The Improvement unit number used by appraisers to compare improvement values.

IMPTYPE: The type code for the improvements that sit on the property.

LNDTYPE: The type code for the land that is associated with the property.

LVNGAREA: The calculated living area of an improvement as measured and determined by the appraisers. This is the living area used to determine values for the tax records.

EFFYRBLT: The effective year that the property would be built in based on development/maintenance to the improvement and overall depreciation factors.

CND CD: The overall condition of the improvement that is on the property.

PPSQFT: The calculated price per square foot of the property, which is based on market value divided by living area.

CTYID: The city identification code if any that is attached to the property.

SCHID: The school district identification code if any that is attached to the property.

## MUD:

OBJECTID: Numeric value sequentially generated as new polygons/lines are added to a layer. It can sometimes be used as a semi-unique attribute for identification purposes. It is not maintained to the degree of accuracy and confidence as the PID attribute of a layer.

NAME: The primary name of the selected Municipal Utility District section.

DESCRIPTIO: Any given ordinances, documents or notations that are helpful in identifying the section of MUD.

SHAPE LENGTH: Overall perimeter of the selected MUD section.

SHAPE AREA: Overall area in square feet of the selected MUD section.

TAX CODE: The short reference tax code associated with the MUD.

## **ROADS:**

OBJECTID: Numeric value sequentially generated as new polygons/lines are added to a layer. It can sometimes be used as a semi-unique attribute for identification purposes. It is not maintained to the degree of accuracy and confidence as the PID attribute of a layer.

ROAD TYPE: Numeric value that designates what type of road the line represents: 1 = Major Hwy / Expressway 2 = Minor Hwy (non interstate) 3 = Expressway / FM (farm to market) 4 = Major Road 5 = Streets 6 = Arterial road in subdivision 7 = Private Road 8 = Unimproved road.

L ADD FROM: Beginning left bounding address range of a road section as it's drawn from start to finish.

L ADD TO: Ending left bounding address range of a road section as it's drawn from start to finish.

R ADD FROM: Beginning right bounding address range of a road section as it's drawn from start to finish.

R ADD TO: Ending right bounding address range of a road section as it's drawn from start to finish.

L ZIP: Zip code associated with the left bound addresses of a selected road section.

R ZIP: Zip code associated with the right bound addresses of a selected road section.

PRE DIR: Prefix direction of a road. (i.e. "N" Hwy 288, "E" Henderson)

PRE TYPE: Prefix type of a road. (i.e. "CR" 398, "Hwy" 288)

STREET NAM: The primary name for a section of roadway.

STREET TYP: The type of road if any. (i.e. Rd, Dr, Cir, Ln, Blvd)

SUF DIR: The suffix direction of a road if any. (i.e. Hwy 35 "E")

ASTRTYPE: The alias or alternate street type of a road.

ASTRNAM: The alias or alternate street name.

STREET LAB: A label displaying the full primary street name for a road section.

ROAD LENGTH: The length in feet of a segment of road.

INUSE: A field that is currently unused, but which will one day be used to distinguish between roads that are in use and roads that are platted, but not actually in use.

INDEXNAME: The indexed name of a road for census purposes.

ALIASINDEX: The alternate indexed name of a road.

#### **SUBDIVISIONS:**

OBJECTID: Numeric value sequentially generated as new polygons/lines are added to a layer. It can sometimes be used as a semi-unique attribute for identification purposes. It is not maintained to the degree of accuracy and confidence as the PID attribute of a layer.

NAME: The platted name of a subdivision, or historical name if it is unplatted.

COMMENTS: Comments regarding subdivision. (i.e. parent accounts, documents, notes)

DESCRIPTIO: Plat reference if any or alternate information from comments field.

ACRES: Total acreage of the subdivision section.