

MS_Bldg_Footp_18

Shapefile



Tags

buildings, Mississippi

Summary

Building footprint polygons of Mississippi structures. This data was generated from BING raster imagery by Microsoft. MDEQ Office of Geology downloaded and converted the Mississippi file from JSON format to a WGS84 shapefile using Mapshaper software. MARIS received this shapefile from MDEQ. Next, MARIS projected the shapefile into MSTM projection. Staff then added attributes : area in square feet, perimeter in feet, and county FIPS and county name. There are around 1,470,000 polygons in this layer. A few polygons were split by county lines when running an Identity with county boundaries.

Description

MS building footprint polygons - 2018

******* See original source download and supplemental Information for details on data creation by Microsoft.**

<https://github.com/Microsoft/USBuildingFootprints>

NOTE: Biloxi is missing the end of the peninsula and there are other tile-sized holes in the data observed.

Microsoft explanation: *"The gap areas contain image tiles taken with different cameras, which is causing the creation of artificial edges between neighboring tiles. These confuse our detection network which hasn't learned to deal with them. We took a very conservative approach of skipping such tiles. I think we could add additional effort in order to properly deal with this problem."*

Credits

Microsoft, BING, MDEQ-Office of Geology, MARIS

Use limitations

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Extent

West -91.689593 **East** -88.097778
North 35.005264 **South** 30.193017

Scale Range

Maximum (zoomed in) 1:5,000
Minimum (zoomed out) 1:150,000,000

ArcGIS Metadata ▶

Topics and Keywords ▶

THEMES OR CATEGORIES OF THE RESOURCE location, planningCadastre, society, structure

* CONTENT TYPE Downloadable Data
EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION No

[Hide Topics and Keywords ▲](#)

Citation ▶

* TITLE MS_Bldg_Footp_18
PUBLICATION DATE 2018-07-10 00:00:00

PRESENTATION FORMATS * digital map

[Hide Citation ▲](#)

Citation Contacts ▶

RESPONSIBLE PARTY
INDIVIDUAL'S NAME Steve Walker
ORGANIZATION'S NAME MARIS
CONTACT'S POSITION GIS Operations Manager
CONTACT'S ROLE originator

CONTACT INFORMATION ▶

PHONE
VOICE 601 432-6149

ADDRESS

TYPE physical
CITY Jackson
ADMINISTRATIVE AREA MS
POSTAL CODE 39211

COUNTRY US
E-MAIL ADDRESS swalker@mississippi.edu

HOURS OF SERVICE
M-f 7-3 CDT

[Hide Contact information ▲](#)

[Hide Citation Contacts ▲](#)

Resource Details ►

DATASET LANGUAGES * English (UNITED STATES)
DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

STATUS historical archive
SPATIAL REPRESENTATION TYPE * vector

SUPPLEMENTAL INFORMATION

***** MICROSOFT SUPPLEMENTAL INFORMATION

Introduction: This dataset originally contained 124,885,597 computer generated building footprints in all 50 US states. This data is freely available for download and use.

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Approximately 125 million building footprint polygon geometries in all 50 US States in GeoJSON format.

CREATION DETAILS

The building extraction is done in two stages:

- 1.Semantic Segmentation – Recognizing building pixels on the aerial image using DNNs
- 2.Polygonization – Converting building pixel blobs into polygons

FIRST STAGE - SEMANTIC SEGMENTATION

DNN architecture

The network foundation is ResNet34 which can be found here. In order to produce pixel prediction output, we have appended RefineNet upsampling layers described in this paper. The model is fully-convolutional, meaning that the model can be applied on an image of any size (constrained by GPU memory, 4096x4096 in our case).

Training details

The training set consists of 5 million labeled images. Majority of the satellite images cover diverse residential areas in US. For the sake of good set representation, we have enriched the set with samples from various areas covering mountains, glaciers, forests, deserts, beaches, coasts, etc. Images in the set are of 256x256 pixel size with 1 ft/pixel resolution. The training is done with CNTK toolkit using 32 GPUs.

Metrics

These are the intermediate stage metrics we use to track DNN model improvements and they are pixel based. The pixel error on the evaluation set is 1.15%. Pixel recall/precision = 94.5%/94.5%

SECOND STAGE - POLYGONIZATION

Method description

We developed a method that approximates the prediction pixels into polygons making decisions based on the whole prediction feature space. This is very different from standard approaches, e.g. Douglas-Peucker algorithm, which are greedy in nature. The method tries to impose some of a priori building properties, which are, at the moment, manually defined and automatically tuned. Some of these a priori properties are:

1. The building edge must be of at least some length, both relative and absolute, e.g. 3 meters
2. Consecutive edge angles are likely to be 90 degrees
3. Consecutive angles cannot be very sharp, smaller by some auto-tuned threshold, e.g. 30 degrees
4. Building angles likely have very few dominant angles, meaning all building edges are forming angle of (dominant angle \pm $\pi/2$)

In near future, we will be looking to deduce this automatically from existing building information.

Metrics

Building matching metrics:

METRIC	VALUE
Precision	99.3%
Recall	93.5%

We track various metrics to measure the quality of the output:

1. Intersection over Union – This is the standard metric measuring the overlap quality against the labels
2. Shape distance – With this metric we measure the polygon outline similarity
3. Dominant angle rotation error – This measures the polygon rotation deviation

On our evaluation set contains ~15k building. The metrics on the set are:

- IoU is 0.85, Shape distance is 0.33, Average rotation error is 1.6 degrees
- The metrics are better or similar compared to OSM building metrics against the labels

OTHER INFORMATION

Data Vintage: The vintage of the footprints depends on the vintage of the underlying imagery. Because Bing Imagery is a composite of multiple sources it is difficult to know the exact dates for individual pieces of data.

How good are the data? Our metrics show that in the vast majority of cases the quality is at least as good as data hand digitized buildings in OpenStreetMap. It is not perfect, particularly in dense urban areas but it is still awesome.

What is the coordinate reference system? EPSG: 4326

Will Microsoft be open sourcing the models? Yes. We are working through the internal process to open source the segmentation models and polygonization algorithms.

Will there be more data coming for other geographies? Maybe. This is a work in progress.

Why are the data being released? Microsoft has a continued interest in supporting a thriving OpenStreetMap ecosystem.

Should we import the data in to OpenStreetMap? Maybe. Never overwrite the hard work of other contributors or blindly import data in to OSM without first checking the local quality. While our metrics show that this data meets or exceeds the quality of hand drawn building footprints, the Data does vary in quality from place to place, between rural and urban, mountains and plains, and so on. Inspect quality locally and discuss an import plan with the community. Always follow the OSM import community guidelines.

State	Number of Buildings	Unzipped MB
Mississippi	1,470,285	438.99

CONTRIBUTING:

This project welcomes contributions and suggestions. Most contributions require you to agree to a Contributor License Agreement (CLA) declaring that you have the right to, and actually do, grant us the rights to use your contribution. For details, visit <https://cla.microsoft.com>.

When you submit a pull request, a CLA-bot will automatically determine whether you need to provide a CLA and decorate the PR appropriately (e.g., label, comment). Simply follow the instructions provided by the bot. You will only need to do this once across all repos using our CLA.

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* **PROCESSING ENVIRONMENT** Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.5.1.7333

CREDITS

Microsoft, BING, MDEQ-Office of Geology, MARIS

ARCGIS ITEM PROPERTIES

- * **NAME** MS_Bldg_Footp_18
- * **SIZE** 212.489
- * **LOCATION** file:///\\SWALKER-PC\E\$\DATA\Building_Footprints_2018\MS_Bldg_Footp_18.shp
- * **ACCESS PROTOCOL** Local Area Network

[Hide Resource Details ▲](#)

Extents ►

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

- EXTENT TYPE** Extent used for searching
- * **WEST LONGITUDE** -91.689593
- * **EAST LONGITUDE** -88.097778
- * **NORTH LATITUDE** 35.005264
- * **SOUTH LATITUDE** 30.193017
- * **EXTENT CONTAINS THE RESOURCE** Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

- * **WEST LONGITUDE** 322933.890432
- * **EAST LONGITUDE** 650821.413661
- * **SOUTH LATITUDE** 1045683.912673
- * **NORTH LATITUDE** 1577832.579046
- * **EXTENT CONTAINS THE RESOURCE** Yes

[Hide Extents ▲](#)

Resource Maintenance ►

RESOURCE MAINTENANCE

UPDATE FREQUENCY as needed

[Hide Resource Maintenance ▲](#)

Resource Constraints ►

CONSTRAINTS

LIMITATIONS OF USE

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SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

[Hide Resource Constraints ▲](#)

Spatial Reference ►

ARCGIS COORDINATE SYSTEM

* TYPE Projected

* GEOGRAPHIC COORDINATE REFERENCE GCS_North_American_1983

* PROJECTION NAD_1983_Mississippi_TM

* COORDINATE REFERENCE DETAILS

PROJECTED COORDINATE SYSTEM

WELL-KNOWN IDENTIFIER 102609

X ORIGIN -5122200

Y ORIGIN -12297100

XY SCALE 450339697.45066422

Z ORIGIN -100000

Z SCALE 10000

M ORIGIN -100000

M SCALE 10000

XY TOLERANCE 0.001

Z TOLERANCE 0.001

M TOLERANCE 0.001

HIGH PRECISION true

LATEST WELL-KNOWN IDENTIFIER 3814

WELL-KNOWN TEXT

PROJCS["NAD_1983_Mississippi_TM",GEOGCS["GCS_North_American_1983",DATUM["D_North_American_1983",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM[

"Greenwich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Transverse_Mer
cator"],PARAMETER["False_Easting",500000.0],PARAMETER["False_Northing",1300000.
0],PARAMETER["Central_Meridian",-
89.75],PARAMETER["Scale_Factor",0.9998335],PARAMETER["Latitude_Of_Origin",32.5],
UNIT["Meter",1.0],AUTHORITY["EPSG",3814]]

REFERENCE SYSTEM IDENTIFIER

* VALUE 3814
* CODESPACE EPSG
* VERSION 6.17.1(10.0.0)

[Hide Spatial Reference ▲](#)

Spatial Data Properties ►

VECTOR ►

* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

FEATURE CLASS NAME MS_Bldg_Footp_18
* OBJECT TYPE composite
* OBJECT COUNT 1471184

[Hide Vector ▲](#)

ARCGIS FEATURE CLASS PROPERTIES ►

FEATURE CLASS NAME MS_Bldg_Footp_18
* FEATURE TYPE Simple
* GEOMETRY TYPE Polygon
* HAS TOPOLOGY FALSE
* FEATURE COUNT 1471184
* SPATIAL INDEX FALSE
* LINEAR REFERENCING FALSE

[Hide ArcGIS Feature Class Properties ▲](#)

[Hide Spatial Data Properties ▲](#)

Geoprocessing history ►

PROCESS

PROCESS NAME
DATE 2018-07-10 07:06:34
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data
Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField Mississippi Orig_Area [AREA_GEO] VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 07:08:37

TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField Mississippi Orig_Perim [PERIM_GEO] VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 07:40:12
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField Bld_Footp_mstm CentX_LL [CENTROID_X] VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 07:42:41
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField Bld_Footp_mstm CentY_LL [CENTROID_Y] VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 10:24:03
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField Bld_Footp_mstm Area_Sq_Ft [Area_SQft] VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 10:26:28
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField Bld_Footp_mstm Area_Sq_Ft "[Area_SQft] * 10.7639" VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 10:30:14
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField Bld_Footp_mstm Perim_Feet "[Perim_M]* 3.28084" VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 10:53:34
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Analysis Tools.tbx\Identity
COMMAND ISSUED

Identity Bld_Footp_mstm stco_noattr
E:\DATA\Building_Footprints_2018\MS_Bldg_Footp_18.shp ALL # NO_RELATIONSHIPS
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 11:16:12
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data
Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField MS_Bldg_Footp_18 CentX_LL [POLY_AREA] VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 11:18:49
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data
Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField MS_Bldg_Footp_18 CentY_LL [PERIMETER] VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 11:27:54
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data
Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField MS_Bldg_Footp_18 Area_Sq_Ft "[POLY_AREA] * 10.7639" VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-07-10 11:30:37
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.5\ArcToolbox\Toolboxes\Data
Management Tools.tbx\CalculateField
COMMAND ISSUED
CalculateField MS_Bldg_Footp_18 Perim_Feet "[PERIMETER] * 3.28084" VB #
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

[Hide Geoprocessing history ▲](#)

Distribution ►

DISTRIBUTION FORMAT
* NAME Shapefile

TRANSFER OPTIONS
* TRANSFER SIZE 212.489
UNITS OF DISTRIBUTION meters

[Hide Distribution ▲](#)

Fields ►

DETAILS FOR OBJECT [MS_Bldg_Footp_18](#) ▶

* TYPE Feature Class

* ROW COUNT 1471184

DEFINITION

Building footprint polygons for Mississippi

DEFINITION SOURCE

MARIS

FIELD [FID](#) ▶

* ALIAS FID

* DATA TYPE OID

* WIDTH 4

* PRECISION 0

* SCALE 0

* FIELD DESCRIPTION

Internal feature number.

* DESCRIPTION SOURCE

Esri

* DESCRIPTION OF VALUES

Sequential unique whole numbers that are automatically generated.

[Hide Field FID](#) ▲

FIELD [Shape](#) ▶

* ALIAS Shape

* DATA TYPE Geometry

* WIDTH 0

* PRECISION 0

* SCALE 0

* FIELD DESCRIPTION

Feature geometry.

* DESCRIPTION SOURCE

Esri

* DESCRIPTION OF VALUES

Coordinates defining the features.

[Hide Field Shape](#) ▲

FIELD [FID_Bld_Fo](#) ▶

* ALIAS FID_Bld_Fo

* DATA TYPE Integer
* WIDTH 10
* PRECISION 10
* SCALE 0
FIELD DESCRIPTION
ESRI Internal Number

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES
none

Hide Field FID_Bld_Fo ▲

FIELD FID_1 ►
* ALIAS FID_1
* DATA TYPE Integer
* WIDTH 10
* PRECISION 10
* SCALE 0
FIELD DESCRIPTION
ESRI ID

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES
none

Hide Field FID_1 ▲

FIELD CentX_LL ►
* ALIAS CentX_LL
* DATA TYPE Double
* WIDTH 19
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Longitude of polygon centroid in decimal degrees

DESCRIPTION SOURCE
MARIS

RANGE OF VALUES
MINIMUM VALUE -91
MAXIMUM VALUE -88

Hide Field CentX_LL ▲

FIELD CentY_LL ►

- * ALIAS CentY_LL
- * DATA TYPE Double
- * WIDTH 19
- * PRECISION 0
- * SCALE 0

FIELD DESCRIPTION

Latitude of polygon centroid in decimal degrees

DESCRIPTION SOURCE

MARIS

RANGE OF VALUES

MINIMUM VALUE 30
MAXIMUM VALUE 35

Hide Field CentY_LL ▲

FIELD Area_Sq_Ft ►

- * ALIAS Area_Sq_Ft
- * DATA TYPE Double
- * WIDTH 19
- * PRECISION 0
- * SCALE 0

FIELD DESCRIPTION

Area of polygon in square feet

DESCRIPTION SOURCE

MARIS

RANGE OF VALUES

MINIMUM VALUE 0
MAXIMUM VALUE 99999999

Hide Field Area_Sq_Ft ▲

FIELD Perim_Feet ►

- * ALIAS Perim_Feet
- * DATA TYPE Double
- * WIDTH 19
- * PRECISION 0
- * SCALE 0

FIELD DESCRIPTION

Perimeter of polygon in feet

DESCRIPTION SOURCE

MARIS

RANGE OF VALUES

MINIMUM VALUE 0
MAXIMUM VALUE 999999

[Hide Field Perim_Feet ▲](#)

FIELD COUNTY ▶

* ALIAS COUNTY
* DATA TYPE Integer
* WIDTH 5
* PRECISION 5
* SCALE 0

FIELD DESCRIPTION
County FIPS

DESCRIPTION SOURCE
MARIS

RANGE OF VALUES
MINIMUM VALUE 1
MAXIMUM VALUE 163

[Hide Field COUNTY ▲](#)

FIELD CONAME ▶

* ALIAS CONAME
* DATA TYPE String
* WIDTH 15
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
County name

DESCRIPTION SOURCE
MARIS

DESCRIPTION OF VALUES
name

[Hide Field CONAME ▲](#)

[Hide Details for object MS_Bldg_Footp_18 ▲](#)

[Hide Fields ▲](#)

Metadata Details ▶

- * METADATA LANGUAGE English (UNITED STATES)
- * METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA * dataset
SCOPE NAME * dataset

* LAST UPDATE 2018-07-11

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0
METADATA STYLE FGDC CSDGM Metadata
STANDARD OR PROFILE USED TO EDIT METADATA FGDC

CREATED IN ARCGIS FOR THE ITEM 2018-07-10 07:25:58
LAST MODIFIED IN ARCGIS FOR THE ITEM 2018-07-11 71:04:70

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes
LAST UPDATE 2018-07-11 07:03:15

[Hide Metadata Details ▲](#)

Metadata Contacts ►

METADATA CONTACT

INDIVIDUAL'S NAME Steve Walker
ORGANIZATION'S NAME MARIS
CONTACT'S POSITION GIS Operations Manager
CONTACT'S ROLE originator

CONTACT INFORMATION ►

PHONE
VOICE 601 432-6149

ADDRESS

TYPE physical
CITY Jackson
ADMINISTRATIVE AREA MS
POSTAL CODE 39211
COUNTRY US
E-MAIL ADDRESS swalker@mississippi.edu

HOURS OF SERVICE

M-f 7-3 CDT

[Hide Contact information ▲](#)

[Hide Metadata Contacts ▲](#)

Metadata Maintenance ►

MAINTENANCE

UPDATE FREQUENCY as needed

[Hide Metadata Maintenance ▲](#)

Thumbnail and Enclosures ►

THUMBNAIL

THUMBNAIL TYPE JPG

[Hide Thumbnail and Enclosures ▲](#)

FGDC Metadata (read-only) ▼

DETAILED DESCRIPTION

ENTITY TYPE

ENTITY TYPE LABEL MS_Bldg_Footp_18

ENTITY TYPE DEFINITION

Building footprint polygons for Mississippi

ENTITY TYPE DEFINITION SOURCE MARIS

ATTRIBUTE

ATTRIBUTE LABEL FID

ATTRIBUTE DEFINITION

Internal feature number.

ATTRIBUTE DEFINITION SOURCE Esri

ATTRIBUTE DOMAIN VALUES

UNREPRESENTABLE DOMAIN

Sequential unique whole numbers that are automatically generated.

ATTRIBUTE

ATTRIBUTE LABEL Shape

ATTRIBUTE DEFINITION

Feature geometry.

ATTRIBUTE DEFINITION SOURCE Esri

ATTRIBUTE DOMAIN VALUES

UNREPRESENTABLE DOMAIN

Coordinates defining the features.

ATTRIBUTE

ATTRIBUTE LABEL FID_Bld_Fo

ATTRIBUTE DEFINITION

ESRI Internal Number

ATTRIBUTE DEFINITION SOURCE ESRI

ATTRIBUTE DOMAIN VALUES

UNREPRESENTABLE DOMAIN

none

ATTRIBUTE

ATTRIBUTE LABEL FID_1

ATTRIBUTE DEFINITION

ESRI ID

ATTRIBUTE DEFINITION SOURCE ESRI

ATTRIBUTE DOMAIN VALUES

UNREPRESENTABLE DOMAIN

none

ATTRIBUTE

ATTRIBUTE LABEL CentX_LL

ATTRIBUTE DEFINITION

Longitude of polygon centroid in decimal degrees

ATTRIBUTE DEFINITION SOURCE MARIS

ATTRIBUTE DOMAIN VALUES
RANGE DOMAIN
RANGE DOMAIN MINIMUM -91
RANGE DOMAIN MAXIMUM -88

ATTRIBUTE
ATTRIBUTE LABEL CentY_LL
ATTRIBUTE DEFINITION
Latitude of polygon centroid in decimal degrees
ATTRIBUTE DEFINITION SOURCE MARIS
ATTRIBUTE DOMAIN VALUES
RANGE DOMAIN
RANGE DOMAIN MINIMUM 30
RANGE DOMAIN MAXIMUM 35

ATTRIBUTE
ATTRIBUTE LABEL Area_Sq_Ft
ATTRIBUTE DEFINITION
Area of polygon in square feet
ATTRIBUTE DEFINITION SOURCE MARIS
ATTRIBUTE DOMAIN VALUES
RANGE DOMAIN
RANGE DOMAIN MINIMUM 0
RANGE DOMAIN MAXIMUM 99999999

ATTRIBUTE
ATTRIBUTE LABEL Perim_Feet
ATTRIBUTE DEFINITION
Perimeter of polygon in feet
ATTRIBUTE DEFINITION SOURCE MARIS
ATTRIBUTE DOMAIN VALUES
RANGE DOMAIN
RANGE DOMAIN MINIMUM 0
RANGE DOMAIN MAXIMUM 999999

ATTRIBUTE
ATTRIBUTE LABEL COUNTY
ATTRIBUTE DEFINITION
County FIPS
ATTRIBUTE DEFINITION SOURCE MARIS
ATTRIBUTE DOMAIN VALUES
RANGE DOMAIN
RANGE DOMAIN MINIMUM 1
RANGE DOMAIN MAXIMUM 163

ATTRIBUTE
ATTRIBUTE LABEL CONAME
ATTRIBUTE DEFINITION
County name
ATTRIBUTE DEFINITION SOURCE MARIS
ATTRIBUTE DOMAIN VALUES
UNREPRESENTABLE DOMAIN
name

[Hide Entities and Attributes ▲](#)