

3D Building Footprints Datasheet

as of 2026-06-30

Coordinate System: Geographic/WGS84, EPSG:4326

Building Point Count: 274 million

Building Polygon Count: 202 million

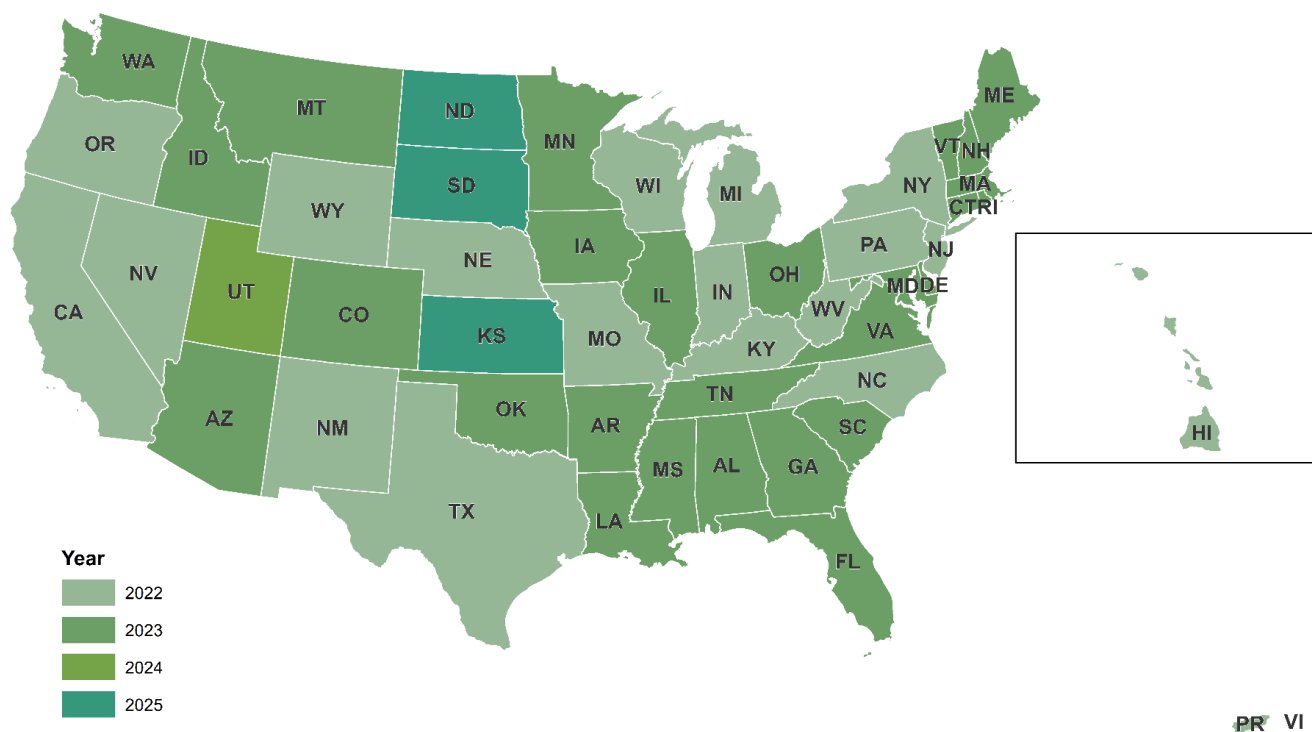
Structure Count: 193 million

Data Coverage: Contiguous US, Puerto Rico, US Virgin Islands, Hawaii, Mariana Islands, American Samoa, and Alaska (partial)¹

Update Cycle: Quarterly releases with model improvements + any new LiDAR and imagery; about half of states refreshed each year; full national refresh every two years

Source data: Lidar + 30/60 cm, color-infrared imagery

Data coverage and freshness



¹ Areas where the government restricts access to aerial imagery due to security reasons may have older or missing data.

US 3D Building Footprints Data Structure

The 3D Building Footprints product augments EarthDefine’s US 2D Building Footprints product and is delivered with two geometry layers: the building footprint geometry as polygons, and a points geometry layer with attribute information. The polygon geometry of the building footprints is derived from EarthDefine’s AI algorithms and subsequently split using parcel data. Each structure has a unique identifier (str_UUID), and each building identified and split by the parcels has its unique identifier (bld_UUID). When a contiguous structure has been split into different buildings using parcel geometries, a contiguous str_UUID may be composed of multiple bld_UUIDs (see below). Each building is addressed using various sources, and corresponding addresses for each building are provided in the point attribute table. There may be more than one point per building or structure, and all points are spatially within the boundaries of their corresponding polygon. The attributes in the point attribute table can be joined to the polygons using the str_UUID or the bld_UUID. The str_UUID and bld_UUID values are semi-stable identifiers and are kept the same assuming there is no significant shift or change with the building, otherwise new UUIDs may be assigned. Multiple points may exist with the same str_UUID and bld_UUID but with different addressing information.

Connected buildings share the same str_UUID but different bld_UUIDs



Data Dictionary

Polygon Schema

Field Name	Description	Example
str_UUID	Universal Unique ID of the entire structure	f985fa5b-9f2e-11eb-abd1-d89d67c66f28
bld_UUID	Universal Unique ID of the building from the parcel split	f9ea1bf5-9f2e-11eb-a32b-d89d67c66f28
Area_SqFt	Area of the building in square feet	24,052

Point Schema

Field Name	Description	Example
str_UUID	Universal Unique ID of the entire structure associated with the Address	f985fa5b-9f2e-11eb-abd1-d89d67c66f28
bld_UUID	Universal Unique ID of the building from the parcel split associated with the Address	f9ea1bf5-9f2e-11eb-a32b-d89d67c66f28
Address	Full address of the building, including City, State, and ZIP Code	8875 NW 26th St, Doral, FL 33172
Address_No	Address number	8875
Street	Address street name	NW 26th St
SubAddress	Sub-unit Address	Unit C2
City	Address city	Doral
STPostal	Address USPS state abbreviation	FL
ZIP	Address Zip Code	33172
State	Address state name	Florida
County	Address county	Miami-Dade County
CTFIPS	County FIPS (Federal Information Processing Standard) Code (The first two digits are the State FIPS Code)	12086
Add_Conf	Address Confidence, dependent on the number	High



Field Name	Description	Example
	of sources and positional relationship to sources, set as low, medium, or high	
Latitude	Latitude in Decimal Degrees of the centroid of the building	25.798749
Longitude	Longitude in Decimal Degrees of the centroid of the building	-80.339941
MaxHeight*	Maximum height of the structure based on latest LiDAR data calculated in feet, excluding potential clutter like an antenna, overhanging tree, etc. (NULL denotes no elevation data)	14.48
MeanHeight*	Mean height of the structure based on latest LiDAR data calculated in feet (NULL denotes no elevation data)	11.58
MaxObjectH*	Maximum height of the structure based on latest LiDAR data calculated in feet, including potential clutter like an antenna, overhanging tree, etc. (NULL denotes no elevation data)	45.06
LAG*	Lowest Adjacent Grade: lowest observed ground elevation above sea level around the boundary of the building	249.77
HAG*	HAG - Highest Adjacent Grade: highest observed ground elevation above sea level around the boundary of the building	252.28
MeanElev*	Mean ground elevation in feet under the structure footprint	250.93
MeanSlope*	Mean roof slope in degrees 0-90 (NULL denotes no elevation data)	33
MaxSlope*	Max roof slope in degrees 0-90 (NULL denotes no elevation data)	45
ModeSlope*	Mode roof slope in degrees 0-90 (NULL denotes no elevation data)	30
II_uuid**	Universal Unique ID of the parcel that intersects the building	9d79f331-9752-423a-b88e-15b5e9ed6b6a
lbcs_activity**	Land Use Code: Activity	3120
lbcs_activity_desc**	Land Use Code Description: Activity	Primarily goods storage or handling



Field Name	Description	Example
lbc_s_function**	Land Use Code: Function	3600
lbc_s_function_desc**	Land Use Code Description: Function	Warehouse and storage services
lbc_s_structure**	Land Use Code: Structure	2700
lbc_s_structure_desc**	Land Use Code Description: Structure	Warehouse or storage facility
lbc_s_site**	Land Use Code: Site	6000
lbc_s_site_desc**	Land Use Code Description: Site	Developed site with buildings
lbc_s_ownership**	Land Use Code: Site	4110
lbc_s_ownership_desc*	Land Use Code Description: Site	City, Village, Township, etc.
Source***	Most modern source of the building footprint, either from aerial imagery or LiDAR	Aerial Imagery
SourceDate	Source data date formatted as MM/DD/YYYY or YYYY when exact capture date is unavailable, will match the source as the most modern date the building was detected	11/26/2019
LiDAR_Year	Vintage of the current LiDAR data on file	2017
Area_SqFt	Area of the building in square feet	24,052
Stories*	Model estimated number of stories based on building attributes if elevation information is available, defaulting	5
GrossArea*	Estimated square footage of the building (Area_SqFt * Stories)	8204.75
Volume*	Volume of the building based on the square footage and the mean height of the polygon in cubic feet.	1234.56
Largest	Identifies the largest structure for every address, indicated as 1 for largest structure or NULL	1

* Available with a 3D license only; 3D metrics are computed from processed LiDAR point-cloud data.

** LBCS codes and ll_uuid are derived from Regrid parcel data

*** Source may differ from where polygon is derived

