# **COUNTY TO BE WEB SCRAPED: TRAVIS**

Developer needs to have VPN to work on this county.

Developer needs to deliver a script that will web scrape both pages from the county:

# Appraiser's web page:

http://propaccess.traviscad.org/clientdb/?cid=1

# **Tax Collector web page:**

https://tax-office.traviscountytx.gov/properties/taxes/account-search

These 2 links need a single input which is a long number called "Parcel ID". The Parcel ID is the ID of every single property within a county.

The script needs to have the feature of that can be stopped and re-started. So when it restarts, it will ask me the question to resume from the beginning or to continue from where it left off.

When it re-starts, it needs to pick up from the next Parcel ID and continue web scraping until the last Parcel ID. Once the script is finished, developer will send me 10,000 Parcel IDs to see the output file data and see how the script works. Once the output file looks ok, developer can send me the script for me to test it in my computer to see how it works. Once it is approved, then developer gets paid.

Same idea is for all other counties.

## The Appraiser's web page has information about:

- Owner's Mailing address: this is the address where the owner might be living in or just receiving his/her bills
- Owner's Property Address: This is the address of the property the Parcel ID is referring to and the one which is out target property
- Owner's Property Information: The Appraiser's web page has information about the property itself. Most
  of the data the script will be web scraping is about the property information. In a county there are usually
  many types of properties, with different usage, and different sides. We can group all properties into 2
  groups: One are the Unimproved property, which refers to vacant land and the other one is call Improved
  Property, which refers to a property that has something built on it.

## The Tax Collector's web page has the following information:

- Owner's Mailing address: Same or similar to the Appraiser's web page
- Owner's Property Address: Same or similar to the Appraiser's web page
- Owner's Property real estate tax information: In this section, the web scrape will scrape data about the tax status of the property.

#### Parcel IDs file

Regarding the Parcel ID in Travis county, there is one peculiarity, which is: Some of these Parcel ID, when entered into the Appraiser's web page and the Tax Collector web page, will show 2 properties. We will web scraped both properties. Some other Parcel ID will return only 1 property. Its assumed that if the Appraisers page shows 2 properties, the Tax Collector will show the same 2 properties.

#### **Parcel IDs**

Please find attached a document with a list of Parcel IDs to be used as the input file.

#### **Screenshots**

I am also attaching several screenshots that indicates what is the data that needs to be web scraped and in which column on my template spreadsheet needs to be placed.

# Template spreadsheet - Output File

Also find attached my template spreadsheet that will be used as the output file

The data that is web scrapped will be placed under the corresponding headers shown in the template spreadsheet. Note: Please do not use column location as a way to place the data in my spreadsheet, but use instead the header names. This way if I need to add or delete columns from my template spreadsheet, the script will follow the headers name and not the column position which will be changed once I delete or add columns.

At the bottom of this document, you will see all the Columns Position and the Header Name for your reference.

## **EXPLANATION ON HOW TO MAKE THE SCRIPT READ THE DATA**

#### **Deleted Account**

Under column AG "SOLD XXXX AUCT XXXX STDA XXXX Developed Deleted Account MLS Exp", the script will write "Deleted Account" when the Appraiser's web pages return a message as "Deleted Account" after the scripts enters a Parcel ID. These are some samples of deleted accounts shown in the Dallas county Appraiser's link since I do not have any sample to show from the Travis Appraisers web page. Here is the link to the Dallas county Appraiser where you can see some samples:

https://www.dallascad.org/SearchAcct.aspx

These are the Parcel IDs that are deleted:

00000537255500400

00000128947000000

00000129193000000

#### **Property Value**

There are some Parcel IDs where the Appraiser web pages does not show any of the following values:

**Market Value:** 

**Land Value:** 

**Improvement Value:** 

**Capped Value:** 

# **Agricultural Value:**

But sometimes these values are found in the Tax Collector web page. For example, using again Dallas county for now since I do not have any sample in Travis county, the following Parcel ID shows data in the Dallas county Tax Collector but no values are found in the Appraisers web page:

https://www.dallasact.com/act\_webdev/dallas/searchbyaccount.jsp

Parcel ID: 00000218833000000.

So, this is what the script has to do: When it sees (read) that the values from the Appraiser's web page are empty, it will leave the row empty. Then when it goes to the Tax Collector web page and find that some or all the terms below have values, it will read the values and place the values under the corresponding columns:

- P JUST MARKET VALUE
- Q LAND VALUE
- R IMPROVEMENT VALUE
- S AGRICULTURAL VALUE
- T x\_features\_val Timber Value
- U JUST MARKET VALUE

#### **Areas**

Column "LAND ACRES" is only for numbers, not for writing the unit or "Unassigned". Units like SQUARE FEE, ACRE, and UNASSIGNED are for column DK "Unassigned Calculated area in SqFt".

When the property area has more than 1 area, then the script should add up all the areas and write the total under column AS "AREA\_SIZE SqFt".

## **Dallas County Multiple area sample**

There are some parcel IDs that have multiple areas, like this one:

Parcel ID: 14105140010020000

This parcel ID shows that in this property there are 2 areas, and each area has 57,150.0000 SQUARE FEET The script will have to add up both areas and write the total, 114,300 SQUARE FEET under column:

DL "LAND SQ FT LND\_SQFT"

# **Improvements**

## DALLAS COUNTY: The following information is for Dallas County Appraiser web page

In some counties, in the Appraiser web page, there are some properties that have 3 different types of headers, or sometimes there is only one of the following 3 headers:

Main Improvement: Data goes between columns "# Story" and "DEPTH" See pic 4b

Improvements: Data goes between columns "# Story" and "DEPTH" See pic 4b

Additional Improvements: Data goes between columns "IMPR\_TYP\_DESC" to "VAL\_AMT") See pic 4b and Pic 4e

The script needs to be able to distinguish these 3 headers and place the data under the corresponding column.

Garage info under sections IMNPROVEMENTS or MAIN IMPROVEMENTS:

When there is "GARAGE" information under section IMPROVEMENTS or MAIN IMPROVEMENTS, then the script will read the information shown in the Appraiser's web page under title "Desc:" the script will enter the info under columns "GARAGE TYPE" and "Total Area"

Sample Parcel ID 00000110712009900

## **Owner's Name**

The 1<sup>st</sup> row in the section of the Owner's Mailing Address has always the name of the owner, so the 1<sup>st</sup> line goes under column FT "APPRAISERS OWNER'S NAME 1" when web scraping the Appraiser's web page and under column GT "TAX COLLECTOR OWNER'S NAME 1" when web scraping the Tax Collector web page.

If the 2nd line begins with a digit 0-9 AND there is a space between the last digit and the character after the space it's a letter or a digit, then the script will consider it as an address and it goes to column "Address 1". Sample of an address 334 10<sup>th</sup> Street.

If the 2nd line begins with a digit 0-9 AND but there is NO space between the last digit and following characters, then the script will consider it as a name and it goes to "APPRAISERS OWNER'S NAME 1" when web scraping the Appraiser's web page and under column GT "TAX COLLECTOR OWNER'S NAME 1" Sample of a Name with digits 123Contractors LLC

# 2<sup>nd</sup> row, Name or Address?

When it comes to writing a code to read the 2<sup>nd</sup> line of the Owner's Name and Owner's Mailing Address in the Appraiser and Tax Collector web pages, the 2<sup>nd</sup> line usually can contain the name of the second owner or the owner's mailing address. The programmer will need to pay attention when writing the code to make sure the

script is able to differentiate between a name and an address. Here are some of the differences that can be written in the script code:

If 2<sup>nd</sup> row begins with:

&

%

DBA

D/B/A

AKA

A/K/A

ATTN

ATTEN

ATT

C/O

EST

**ESTATE** 

ETAL

ET AL

FBO

LTD

REM

c /c

S/C

TRUST

**IRREVOCABLE** 

SERIES

then the 2<sup>nd</sup> row it's a name and it goes under column:

FV APPRAISERS OWNER'S NAME 2

Or under column:

GP Tax Collector Owner's Name 2

Depending on if the script is web scraping the Appraiser or the Tax Collector web page.

Some companies have numbers in the name without space, like for example

123Construction

1&1Construction

These are not an address because there is no space between the numbers and the letters or the next character.

# 3<sup>rd</sup> row, Name or Address?

The 3<sup>rd</sup> row will always be considered as an address, so as the 1<sup>st</sup> line address, it will be placed under column Address 1

Once the script identifies that the address begins on the 2<sup>nd</sup> row or on the 3<sup>rd</sup> row, then the script will take into account every coma to split the address among the columns "Address 1", "Address 2", and "Address 3"

# **Countries, Independent regions, and Islands**

Please find attached a list of 129 Countries, Independent regions, and Islands that the scripts needs to be able to identify. Once the country is identified, then it will be p[laced under column:

**Appraiser Owner's Country** 

OR

#### TAX COLLECTOR OWNER'S MAILING COUNTRY

Additionally, once the country is identified, what ever is before the country or in the line above or up to the next coma, it will go under column

APPRAISER OWNER'S MAILING CITY

OR

#### TAX COLLECTOR OWNER'S MAILING CITY

For example, in Harris County Appraiser's web page we have 2 cases:

Parcel ID: 1289640010003

MALCOLM VIDA Under column "APPRAISER OWNER'S NAME 1"
GARVIN MARLENE Under column "APPRAISER OWNER'S NAME 2"

MCCAULAY PARK W This is the 3<sup>rd</sup> row, then it goes under column Address 1

CALIFORNIA, TRINIDAD See note below

WEST INDIES "Appraiser Owner's Country"

"WEST INDIES" IS IN THE LIST OF COUNTIRES AND HGOES UNDER COLUMN "Appraiser Owner's Country"

Whatever is the row above the country and after the coma, if there is any coma, it goes under column "APPRAISER OWNER'S MAILING CITY". In this case "TRINIDAD" is in the row above 'WEST INIDIES" AND is after a coma, then "TRINIDAD" goes under column "APPRAISER OWNER'S MAILING CITY"

"CALIFORNIA" is on the 4<sup>th</sup> row ANDthe "APPRAISER OWNER'S MAILING CITY" is taken spot AND Address 1 Its already a taken spot so then it goes under column Address 2

Note: The 3<sup>rd</sup> row is not a state, a province nor a country, so it stays under column Address 1

Parcel ID: 0422650010135

JOULE TRADING LIMITED Under column "APPRAISER OWNER'S NAME 1"

ATTEN: MARTIN ANTENEY-HOARE Under column "APPRAISER OWNER'S NAME 2" because begis with

"ATTEN"

15 ATHOL ST This is the 3<sup>rd</sup> row, then it goes under column Address 1

DOUGLAS, ISLE OF MANN See note below

UK "Appraiser Owner's Country"

"ISLE OF MANN" is on the row above the country and after the coma, so then it goes under column "APPRAISER OWNER'S MAILING CITY"

"DOUGLAS" is on the 4<sup>th</sup> row ANDthe "APPRAISER OWNER'S MAILING CITY" is taken spot AND Address 1 Its already a taken spot so then it goes under column Address 2

Parcel ID: 1162760000062

SHAO TZU TSUN Under column "APPRAISER OWNER'S NAME 1"

303 SEC 2 SA TAN RD Under column "Address 1" TATU VILLAGE Under column "Address 2"

TAICHUNG Under column "APPRAISER OWNER'S MAILING CITY" since its in the row before the

country

TAIWAN ROC Under column "Appraiser Owner's Country" (You can ignore ROC)

# Appraiser and Tax Collector Owner's Mailing address and Owner's Property Address

In the template we have 4 sections regarding addresses as shown below. In these 4 sections I have color code the Addresses 1, 2, and 3

- Address 1
- Address 2
- Address 3

When I write a rule for Address 1, the rule will apply to all 4 Address 1 shown in the 4 sections as shown below. Same thing goes for Address 2 and Address 3.

- 1. Appraiser's Owner Mailing Address
- 2. Appraiser's Owner Property Address
- 3. Tax Collector's Owner Mailing Address
- 4. Tax Collector's Owner Property Address

For the **Appraiser's Owner Mailing address**, the template has the following columns that the script needs to populate:

Note: Where there is an "X", it means that the script will leave this column in blank.

- FT APPRAISERS OWNER'S NAME 1
- FU X
- FV APPRAISERS OWNER'S NAME 2
- FW APPRAISER OWNER'S MAILING Address 1
- FX X
- FY "APPRAISER OWNER'S MAILING Address 2 Suit # Apt #"
- FZ "APPRAISER OWNER'S MAILING Address 3 Building"
- GA APPRAISER OWNER'S MAILING CITY
- GB "Appraiser Owner's Mailing State OR Province"
- GC "Appraiser Owner's Mailing ZIP Code OR Postal Code"
- GD Appraiser Owner's ZIP Code corrected with spreadsheet program
- GE Appraiser Owner's ZIP Code Extension
- GF X
- GG Appraisers Owner's Country

For the **Appraiser's Owner Property Address**, the template has the following columns that the script needs to populate:

- JB Appraisers Property Address 1
- JC "Appraisers Property Address 2 Suit # Apt #"
- JD "Appraisers Property Address 3 Building"
- JE Appraisers Property City
- JF Appraisers Property State
- JG Appraisers Property ZIP Code POSTAL CODE
- JH Appraisers STREET NAME

For the **Tax Collector's Owner Property Address**, the template has the following columns that the script needs to populate:

GT TAX COLLECTOR OWNER'S NAME 1 GU TAX COLLECTOR OWNER'S NAME 2 G۷ TAX COLLECTOR OWNER'S MAILING Address 1 GW TAX COLLECTOR OWNER'S MAILING Address 2 Suit # Apt # GΧ TAX COLLECTOR OWNER'S MAILING Address 3 Building GΥ TAX COLLECTOR OWNER'S MAILING CITY TAX COLLECTOR OWNER'S MAILING STATE OR PROVINCE GΖ TAX COLLECTOR OWNER'S MAILING ZIP CODE OR POSTAL CODE HA HB TAX COLLECTOR OWNER'S MAILING ZIP CODE EXTENTION

HC X

HD TAX COLLECTOR OWNER'S MAILING COUNTRY

For the **Tax Collector's Owner Property Address**, the template has the following columns that the script needs to populate:

JL Tax Collector Property Address 1

JM Tax Collector Property Address 2 Suit # Apt #

JN Tax Collector Property Address 3 Building

JO Tax Collector Property City

JP ax Collector Property State

JQ Tax Collector Property ZIP Code POSTAL CODE

Tax Collector STREET NAME

# **Orientation Street**

Many of the street uses street orientations, such as North, N, South, S, East, E and West, W. For example, let's says the Appraiser's Owner Mailing address is: 1234 Main Street E. The script will write under "Address 1" the address "1234 Main Street E"

So, the script will keep under this column in the same cell: Street Number, Street Name, Street Suffix, and Street Orientation

For example the orientation can be placed before or after the street number and street name, like this: 539 W 25TH ST UNIT C

OR

JR

**539 25TH ST W UNIT C** 

So in order to keep the address together under the same column, we will add this criteria:

If the orientation is follow by a number, then the address after the orientation stays together under the same column.

## **Street Type/Suffix**

After the street number and street name, there is always a description of the street type called "Suffix". Below there is a list of suffixes that the script will need to incorporate and be able to identify when web scraping. Rule: If there is no street orientation after the suffix, then anything that is after these suffixes, the script will write it in the next column "Address 2". And anything up to the suffix or street orientation if included in the address, will stay under column "Address 1":

PKWY, PARKWAY ALY, ALLEY AVE, AVENUE BCH, BEACH BLVD, BOULEVARD

BRG, BRIDGE

BYP, BYPASS

CTR, CENTER

CIR, CIRCLE

CT, COURT

CRK, CREEK

CRES, CRESCENT

XING, CROSSING

XRD, CROSSROAD

DR, DRIVE

EST, ESTATES

GTWY, GATEWAY

GRV, GROVE

HBR, HARBOR

HVN, HAVEN

HLS, HILLS

INLT, INLET

IS, ISLAND

LK, LAKE

LN, LANE

LOOP

MNR, MANOR

MDW, MEADOW

MT, MOUNT

MTN, MOUNTAIN

ORCH, ORCHARD

PKWY, PARKWAY

PASS

PL, PLACE

PLZ, PLAZA

RNCH, RANCH

RDG, RIDGE

RD, ROAD

RTE, ROUTE

SHR, SHORE

SKWY, SKYWAY

SPG, SPRING

SQ, SQUARE

STA, STATION

STRM, STREAM

ST, STREET

SMT, SUMMIT

TER, TERRACE

TRL, TRAIL

TPKE, TURNPIKE

VLY, VALLEY

VW, VIEW

VLG, VILLAGE

VIS, VISTA

WAY

How can the script identify if in the address there is a suffix? The script will read the address, then after every space will check if the next 2 letters match one of the suffixes listed above. If it matches, then it will be kept the address together with the street number and street name. Below are some samples:

For example, if the web page shows these addresses:

- 4825 NORTHRIDGE CT NE
   2319 CREEKSIDE CIR N
- 3. 1 CVS DR MC 2320
- 4. 1220 CORPORATE DR E5. 100 N COTTONWOOD DR 104

The script will read the address above and write under column Address 1 and Address 2 this is way:

4825 NORTHRIDGE CT NE (Address 1)
 2319 CREEKSIDE CIR N (Address 1)
 1 CVS DR (Address 1)
 1220 CORPORATE DR E (Address 1)

4. 1220 CORPORATE DR E (Address 1)

5. 100 N COTTONWOOD DR (Address 1) 104 (Address 2)

Some time there are more than one suffix in the same address, like for example:

3000 TURTLE CREEK BLVD

The script should include all the suffix under the same column and then place the rest of the following addres in the next column

MC 2320 (Address 2)

## Exception to the above rule

If in the address we have any of these 3 words/abbreviations, these are not suffixes, but street name. So, if the address has any of these words/abbreviations, then the script will keep the address all together under column Address 1:

EXPY, EXPW, EXPRESWAY (including numbers after EXPY, EXPW, EXPRESWAY, but not letters)

FWY, FRWY, FREEWAY (including numbers after FWY, FRWY, FREEWAY, but not letters)

HWY, HIGHWAY (including numbers after HWY, HIGHWAY, but not letters). See sample Parcel ID 600385000510A0000

# Warning:

For example, there are some street names that might include some of the abbreviations in the list above. For example, there are some streets that are name "STEMMONS FWY". When the script reads "STE", it might think that it's a street suffix instead of a street name. In this case the code needs to include a space before and after "STE" to make sure it different between the street name and the suffix.

### **After Street Suffix and Street Orientation**

Whatever is after the Street Suffix and Street orientation if any, it will go to the next column **Address 2** as well as to column **Address 3** If condition applies.

For example, if the address is as this one

1234 MAIN ST E APT A BLDG B

The script will write:

1234 MAIN ST E Address 1
APT A Address 2
BLDG B Address 3

In this address the script will be able to identify the orientation "E" and write "1234 Main St E" under column Address 1

and move the rest of the address to the following column(s)

So, after the suffix or street orientation, if there is any additional address information, then it will be following by the following abbreviations, words, or characters:

PTA

STE

#

APT

BLDG

LOT

SUITE

PMB

. ....

SPACE

UNIT

FLR

**FLOOR** 

These characters follow by any digit will be placed under column Address 2

Any address that has "BLDG" will go under column Address 3

## **Only Street Name**

Columns JH "Appraisers STREET NAME" and column JM "Tax Collector Street Name" will be exactly as **Address 1** but without the street number. For example, if the Appraiser's web page shows the street address as:

then under column Address 1 will write "1131 11th St E" and under "Appraisers Street Name" will write "11th St E".

Same rule applies for "Tax Collector Street Name" about the address in the Tax Collector web page.

#### Ownership %

Ownership goes under column "Ownership %". No need to use the "%" sign

#### **States/Provinces Abbreviations**

Usually on the 3<sup>rd</sup> line or 4<sup>th</sup> line of the Owner's mailing address, there is the State or Province in case the owner is from outside of USA. The State or Provinces usually is after a coma. Once the script reads the state, if the State is written in the page with its full name, the script will write in the template the abbreviation of the State or Province. This information will be place under the following columns:

Column GB "Appraiser Owner's Mailing State OR Province" when the script is reading the Appraiser's web page

Column GZ "TAX COLLECTOR OWNER'S MAILING STATE OR PROVINCE" when the script is ready the Tax Collector web page.

The code should include all the US, Canada, and UK abbreviations. Below are the abbreviations for USA and Canada:

# USA:

ALABAMA AL
ALASKA AK
AMERICAN SAMOA AS
ARIZONA AZ
ARKANSAS AR

CALIFORNIA COLORADO CONNECTICUT DELAWARE DISTRICT OF COLUMBIA FLORIDA GEORGIA GUAM HAWAII IDAHO ILLINOIS INDIANA IOWA KANSAS KENTUCKY LOUISIANA MAINE MARYLAND MASSACHUSETTS MICHIGAN MINNESOTA MISSISSIPPI	CA CO CT DE DC FL GA GU HI ID IL IN IA KS KY LA ME MD MA MI MN MS
MISSOURI	MO
MONTANA NEBRASKA	MT NE
NEVADA	NV
NEW HAMPSHIRE	NH
NEW JERSEY	NJ
NEW MEXICO	NM
NEW YORK	NY
NORTH CAROLINA	NC
NORTH DAKOTA	ND
NORTHERN MARIANA IS	MP
OHIO	ОН
OKLAHOMA	ОК
OREGON	OR
PENNSYLVANIA	PA
PUERTO RICO	PR
RHODE ISLAND	RI
SOUTH CAROLINA	SC
SOUTH DAKOTA	SD
TENNESSEE	TN
TEXAS	TX
UTAH	UT
VERMONT	VT
VIRGINIA VIRGIN ISLANDS	VA VI
WASHINGTON	WA
WEST VIRGINIA	WV
WISCONSIN	WI
WYOMING	WY

#### **Provinces of Canada:**

Newfoundland and Labrador NLPrince Edward Island PE Nova Scotia NS **New Brunswick** NB Quebec QC Ontario ON Manitoba MB Saskatchewan SK Alberta AΒ **British Columbia** BC Yukon YΤ **Northwest Territories** NT Nunavut NU

# **USA ZIP Codes / Canada Postal Codes / United Kingdom Postcode**

Under the following columns the script will place the USA ZIP Codes or Canada Postal Codes or United Kingdom Postcode

Column GC "Appraiser Owner's Mailing ZIP Code OR Postal Code" when the script is reading the Appraiser's web page

Column HA "TAX COLLECTOR OWNER'S MAILING ZIP CODE OR POSTAL CODE" when the script is reading the Tax Collector web page.

The USA ZIP Code are composed only of digits and usually they are shown in the Appraiser and Tax Collector Owner's mailing address.

The Canada Postal Code and UK Post Code are composed of digits and numbers, so we will call them characters. They are usually composed of 6 or 8 characters with a space in the middle. The script will have to be able to read the 1<sup>st</sup> 3 or 4 characters and compare the characters with the attached list of Postal Codes and Postcodes. Once it finds a matching character, the script will copy the full version of the Postal Code or Postcode and place it under the columns mentioned above. The script will also copy from the attached spreadsheet the corresponding city to that Postal Code/Postcode and place the city under column:

GT "APPRAISER OWNER'S MAILING CITY" when the script is reading the Appraiser's web page

HR "TAX COLLECTOR OWNER'S MAILING CITY" when the script is reading the Tax Collector web page.

For example, lets says that the web pages shows the Owner's Billing Address from Canada is: John Smith
19 Nolan Ave, Ottawa
ON K1Y, Canada

Then the script once it starts reading the 3<sup>rd</sup> line, it should be able to identify the Province abbreviation "ON" and place it under one of the columns:

Column GB "Appraiser Owner's Mailing State OR Province" when the script is reading the Appraiser's web page

Column GZ "TAX COLLECTOR OWNER'S MAILING STATE OR PROVINCE", when the script is reading the Tax Collector web page.

Then it will read the following 3 characters "K1Y" and check with the attached table the full version of the Postal Code which is "K1Y 3R2" and place the Postal Code under column

Column GC "Appraiser Owner's Mailing ZIP Code OR Postal Code", when the script is reading the Appraiser's

web page

Column HA "TAX COLLECTOR OWNER'S MAILING ZIP CODE OR POSTAL CODE", when the script is reading the Tax Collector web page.

See attached the list of Postal Codes from Canada and Postcodes from UK.

From the Dallas County Appraiser web page, there are some samples of Postal Codes that needs to be placed under column "Appraiser Owner's Mailing ZIP Code OR Postal Code":

00000110712009900

00000110712750000

00000101947000000

00000101968000000

00000101956000000

00000101953000000

00000101938000000

#### Investor/Owner

Many counties show in the page of the Tax Collector who paid the taxes. Under the following column, the script will write "Owner" or Investor. It will write Owner when the name of the Owner and the name of the taxpayer are the same. If the name of the owner does not match with the name of the taxpayer, then the script will write "Investor"

NY "Redeemed or paid by 1. Owner 2. Investor 3. UNK 4. Change of address 5. USAR 200X (if changed Title from a NUSAR) 6. Lot for sale by County 7. Certificate of title 20XX 8. Calles Developments 9. Fiduciary"

## 1<sup>st</sup> and last year of Unpaid Taxes

Column "1st year of Unpaid taxes" will show the year of the 1st unpaid year of taxes.

For example, with Dallas County Tax Collector:

https://www.dallasact.com/act\_webdev/dallas/searchbyaccount.jsp

If we enter Parcel ID 00000679273000000

The click on Parcel ID, then click on "Taxes Due Detail by Year and Jurisdiction", it will show that this owner has not paid taxes since 2003. So, the 1<sup>st</sup> year of unpaid taxes is 2003, and the script will write "2003" under column:

ME "1st year of Unpaid taxes"

Then it also shows that the taxes have not been paid up to 2020, so the last year of unpaid taxes is 2020. Then under column:

MF "Last year of Unpaid taxes"

The script will write "2020"

### **Date of Sale**

Column LQ "LAST SALE DATE DEED TRANSFER DATE" needs to show the lats date or the Deed transfer date in the format of: MM/DD/YY

Column LP "LAST YEAR SALE" will show only the year of the last sale of the yare of the deed transfer.

If there is no date, then the script should write "N/A" in both columns

## **COLUMNS POSITION AND HEADER NAMES**

- A State
- B COUNTY
- C "PARCEL ID APPRAISER"
- D "PARCEL ID TAX COLLECTOR MAP"

```
Ε
       "ALKEY#
                     Geographic ID Map Facet
                                                  BLOCK"
F
       "Map ID
                     LOT"
G
       ALTKEY#
Н
       ZONING
                                                         State Code"
ı
       "SITE CODE
                     BAS_STRT
                                   BLDG_CLASS_CD
                            Type"
J
       "Valuation Group
Κ
       DESCRIPTION / EXPLANATION OF CASE USED IN COLUMN "H"
       "MOBILE HOME/VACANT LOT CORRESPONDING PARCEL ID
L
                                                                GIS_PARCEL_ID LAND USE CODE
       Neighborhood CD"
       "QUAL CD1
                     STATE USE CODE"
Μ
       "Use Code
                                                  Property Class 2"
Ν
                     Use Type
                                   DOR UC
       "Use Code
                                                  Property Class 1a"
0
                     Use Type
                                    DOR_UC
Ρ
       JUST MARKET VALUE
Q
       LAND VALUE
R
       IMPROVEMENT VALUE
S
       AGRICULTURAL VALUE
Т
       "x features val Timber Value"
       JUST MARKET VALUE
U
V
       Χ
W
       Χ
Χ
       Χ
Υ
       Χ
Ζ
       Χ
       Χ
AA
AΒ
       Χ
AC
       Χ
ΑD
       Χ
ΑE
       Χ
ΑF
       Χ
       "SOLD XXXX
                                   STDA XXXX
                                                                Deleted Account
                                                                                      MLS Exp"
ΑG
                     AUCT XXXX
                                                  Developed
ΑН
       Χ
       Χ
ΑI
ΑJ
       Χ
ΑK
       Χ
       MY PROPERTY RANKING
ΑL
AM
       # Of Stories
ΑN
       NUMBER OF UNITS APPARTMENTS
ΑO
       Elevator stops #
AΡ
       "DESIRABILITY_RATING Class Code
                                          Cond / Desir / Util
                                                                Economic Obsolence"
AQ
       BLDG_CLASS_DESC
       "Quality"
AR
AS
       "Condition
                     Physical Condition"
ΑТ
       "Construction Type
                            Construction Frame"
ΑU
       "Foundation
                     Foundation Type"
ΑV
       Roof Type
ΑW
       Roof Material
ΑX
       Fence Type
ΑY
       "Ext. Wall Material
                            1"
                            2"
ΑZ
       "Exterior Wall
                            3"
BA
       "Exterior Wall
BB
       Basement
```

```
BC
       Heating
BD
       Air Condition
BE
       # Wet Bars
BF
       # Fireplaces
BG
       Sprinkler (Y/N)
ВН
       "SPA
             #"
ВΙ
       Pool (Y/N)
BJ
       SAUNA IND
ВК
       # Of KITCHENS
BL
       Room: Total
BM
       Room: Rec
BN
       # OF BEDROOMS
ВО
       # OF FULL BATHROOMS
BP
       # OF 1/2 BATHROOM
BQ
       GARAGE TYPE
BR
                            # Garage"
       "Improvement Type
BS
       IMPR TYP DESC (Improvements type description)
ВТ
       "Additional Improv Area (SqFt) Garage area"
BU
       IMPR DESC (improvement description)
BV
       # of Additional Improvements with same State Code
BW
       "TOTAL MAIN/ BUILDING AREA SQ FT This is for Improved Properties but not Living Areas
                                                                                             #1"
ВХ
       "RESIDENCE
                                           Mobile Home Lease area"
                     Total Living Area
BY
       "MULTIPLE RESIDENCE Total Living Area"
ΒZ
       "HIGHRISE APARTMENT Total Living Area"
CA
       "Total area
                     BASE AREA PRI (Downstairs)"
CB
       "Total area
                     BASE AREA UPR (Upstairs)"
CC
       "YEAR BUILT
                     #1"
CD
       FRONTAGE
CE
       DEPTH
CF
       OFFICE/FLEX
CG
       RESTAURANT
CH
       LAUNDROMAT
       "STORAGE
                     WAREHOUSE Total area"
CI
CJ
       Χ
CK
       Χ
CL
       IMPROVEMENTS F1
CM
       "DECK UNCOVERED
                            TOTAL #"
CN
       "DECK UNCOVERED
                            AREA SQFT"
CO
       "DECK COVERED
                            TOTAL #"
CP
       "DECK COVERED
                            AREA SQFT"
CQ
       "Number of PATIO/PORCH
                                   Total # of OPEN FRAME PORCH PRI"
CR
       "Total area
                     OPEN FRAME PORCH PRI"
CS
       "Total # of
                     OPEN FRAME PORCH UPR"
СТ
       "Total area
                     OPEN FRAME PORCH UPR"
CU
       "Total area
                     OPEN MAS PORCH PRI"
       "Total area
                     ENCL FRAME PORCH PRI"
CV
CW
       "Total area
                     ENCL FRAME PORCH UPR"
CX
       "Total area
                     CARPOT PRI"
CY
       "Total area
                     MAS/CONC/ PATIO PRI"
CZ
       "Total area
                     STONE/TILE
                                   PATIO UPPER"
```

DA

"Total # of

Canopy"

- DB "Total area of Canopy"
- DC "TERRACE Total area"
- DD FENCE
- DE Loading Dock
- DF Asphalt
- DG "PAVED AREA Total area"
- DH X
- DI X
- DJ IMPROVEMENTS
- DK IMPR TYP DESC
- DL IMPR DESC
- DM YEAR BUILT 2
- DN CONSTR\_TYP\_DESC
- DO FLOOR\_TYP\_DESC
- DP EXT\_WALL\_DESC
- DQ NUM\_STORIES
- DR "AREA\_SIZE SqFt"
- DS "VAL\_AMT \$"
- DT Additional Property Improv
- DU "MOBILE HOME TYPE Description"
- DV MBL\_HOME\_SER\_NUM
- DW MBL\_HOME\_MANUFCTR
- DX MBL\_HOME\_LENGTH
- DY MBL\_HOME\_WIDTH
- DZ "MBL\_HOME\_SPACE/AREA #"
- EA MOBILE HOME
- EB PROPERTY DETAILS
- EC TYPE OF UNIT
- ED "Unassigned Calculated area in SqFt"
- EE "LAND SQ FT LND\_SQFT"
- EF LAND ACRES
- EG X
- EH X
- EI X
- EJ X
- EK X
- EL X
- EM X
- EN X
- EO X
- EP X
- EQ X
- ER X
- ES X
- ET X EU X
- EV X
- EW X
- EX X
- EY X
- EZ X

```
FΑ
      Χ
FΒ
       Χ
FC
      Χ
FD
      Χ
FΕ
      Χ
FF
      Χ
FG
       Χ
FΗ
       Χ
FΙ
       Χ
FJ
       Χ
FΚ
       Χ
FL
       Χ
FM
       Χ
FΝ
       Χ
FO
       Χ
FΡ
      Χ
FQ
      Χ
FR
       Χ
FS
       Χ
FΤ
       Χ
FU
       Χ
FV
       Χ
FW
       Χ
       Χ
FΧ
FΥ
       Χ
FΖ
       Χ
GΑ
       Χ
GB
      Χ
GC
      Χ
GD
      Χ
       Χ
GE
GF
       Χ
GG
       Χ
       Χ
GH
       Χ
GΙ
GJ
       Χ
GΚ
       Χ
GL
       Χ
GM
       APPRAISERS OWNER'S NAME 1
GN
      Χ
GO
       APPRAISERS OWNER'S NAME 2
GP
       APPRAISER OWNER'S MAILING Address 1
GQ
      Χ
GR
       "APPRAISER OWNER'S MAILING Address 2
                                                 Suit # Apt #"
GS
       "APPRAISER OWNER'S MAILING Address 3
                                                 Building"
GT
       APPRAISER OWNER'S MAILING CITY
GU
       "Appraiser Owner's Mailing State
                                          OR
                                                 Province"
G۷
       "Appraiser Owner's Mailing ZIP Code
                                          OR
                                                 Postal Code"
GW
       Appraiser Owner's ZIP Code corrected with spreadsheet program
GΧ
       Appraiser Owner's ZIP Code Extension
GΥ
       Appraiser Owner's Region
```

```
GΖ
       Appraisers Owner's Country
НΑ
       Χ
ΗВ
      Χ
HC
      Χ
HD
      Χ
ΗE
      Χ
HF
      Χ
HG
      Χ
НН
       Χ
ΗΙ
      Χ
HJ
       Χ
НΚ
       Χ
HL
       Appraiser Owner's Contact Info
HM
      TAX COLLECTOR OWNER'S NAME 1
HN
       TAX COLLECTOR OWNER'S NAME 2
НО
      TAX COLLECTOR OWNER'S MAILING Address 1
ΗP
       "TAX COLLECTOR OWNER'S MAILING Address 2 Suit # Apt #"
       "TAX COLLECTOR OWNER'S MAILING Address 3 Building"
HQ
       TAX COLLECTOR OWNER'S MAILING CITY
HR
HS
       "TAX COLLECTOR OWNER'S MAILING STATE
                                                OR
                                                       PROVINCE"
                                                       POSTAL CODE"
HT
       "TAX COLLECTOR OWNER'S MAILING ZIP CODE OR
HU
       TAX COLLECTOR OWNER'S MAILING ZIP CODE EXTENTION
HV
       TAX COLLECTOR OWNER'S REGION
HW
      TAX COLLECTOR OWNER'S MAILING COUNTRY
НΧ
      Χ
ΗY
      Χ
HΖ
      Χ
IΑ
      Χ
ΙB
      Χ
IC
      Χ
ID
       Χ
ΙE
       Χ
IF
       Χ
       Χ
IG
ΙH
       Χ
Ш
       Tax Collector Owner's Contact Info
IJ
       Χ
ΙK
      Χ
ΙL
      Χ
IM
      Χ
IN
       Χ
IO
       Χ
ΙP
       Χ
       Χ
IQ
IR
       Χ
IS
       Χ
ΙT
       Χ
IU
       Χ
IV
      Χ
IW
      Χ
ΙX
      Χ
```

```
ΙY
       Χ
ΙZ
       Χ
JΑ
       Χ
JB
       "DISABLED_DESC
                              (either spouse)"
       HOMESTEAD
JC
JD
       "OVER65
                      (either spouse) IF EST then property can be bought to heirs"
JΕ
       Owner's Condition
JF
       Χ
JG
       Χ
JΗ
       Χ
IJ
       Χ
IJ
       Χ
       Χ
JK
JL
       Χ
       Χ
JM
JN
       Χ
JO
       Χ
JΡ
       Χ
       "Ownership
JQ
JR
       "Legal Description
                              S LEGAL"
JS
       Legal Description
JΤ
       "Use Code
                      Use Type
                                      DOR UC
                                                     Property Class 1b"
JU
       Appraisers Property Address 1
       "Appraisers Property Address 2 Suit # Apt #"
JV
JW
       "Appraisers Property Address 3 Building"
       Appraisers Property City
JX
JΥ
       Appraisers Property State
JΖ
       Appraisers Property ZIP Code
KΑ
       Appraisers Street Name
KΒ
       Χ
KC
       Χ
KD
       Appraiser Property Address
ΚE
       Tax Collector Property Address 1
KF
       "Tax Collector Property Address 2
                                             Suit # Apt #"
KG
       "Tax Collector Property Address 3
                                             Building"
KH
       Tax Collector Property City
ΚI
       Tax Collector Property State
ΚJ
       Tax Collector Property ZIP Code
KK
       Tax Collector Street Name
KL
       Χ
       Tax Collector Property Address
KM
ΚN
       Χ
KO
       Χ
ΚP
       Χ
KQ
       Χ
KR
       Χ
KS
       Χ
ΚT
       Χ
KU
       Χ
ΚV
       Χ
KW
       Χ
```

```
ΚX
      Χ
ΚY
      Χ
ΚZ
      Χ
LA
      Χ
LB
      Χ
LC
      Χ
LD
      Χ
LE
      Χ
LF
      Χ
LG
      Χ
LH
      Χ
LI
      Χ
LJ
      Χ
LK
      Χ
LL
      Χ
LM
      Χ
LN
      Χ
LO
      Χ
LP
      Χ
      Χ
LQ
LR
      Χ
LS
      Χ
LT
      Χ
LU
      Χ
LV
      Χ
LW
      Χ
LX
      Χ
LY
      Χ
LZ
      Χ
MA
      Χ
MB
      Χ
MC
      Χ
MD
      Χ
ME
      Χ
MF
      Χ
      Χ
MG
МН
      Χ
      LAST YEAR SALE
MΙ
MJ
      "LAST SALE DATE
                          DEED TRANSFER DATE"
MK
      SALE PRICE
ML
      "TYPE OF DEED OR
                         LAST/LATEST DOCUMENT RECORDED"
MM
      "DESCIPTION OF THE PREVIOUS COLUMN TYPE OF DEED OR DOCUMENT RECORDED"
MN
      "BOOK Deed#"
МО
      PAGE
MP
      DEED INFO
MQ
      Χ
MR
      Χ
MS
      Χ
MT
      Χ
MU
      Χ
```

MV

Χ

```
MW
      Χ
MX
      1st year of Unpaid taxes
MY
      Last year of Unpaid taxes
ΜZ
      Did the owner recently paid some back taxes or all back taxes?
NA
      "Paid taxes by Unknown
                                  R (redeemed from Certificate) TDAR (redeemed from a TDA) No Tax
Due = NTD"
NB
      TAX DEED YEAR
NC
      BEFORE 1990
ND
       DUE AMOUNT FOR 1990
NE
      DUE AMOUNT FOR 1991
NF
       DUE AMOUNT FOR 1992
NG
      DUE AMOUNT FOR 1993
NH
      DUE AMOUNT FOR 1994
NI
      DUE AMOUNT FOR 1995
NJ
      DUE AMOUNT FOR 1996
NK
      DUE AMOUNT FOR 1997
NL
      DUE AMOUNT FOR 1998
NM
      DUE AMOUNT FOR 1999
NN
      DUE AMOUNT FOR 2000
NO
      DUE AMOUNT FOR 2001
NP
      DUE AMOUNT FOR 2002
NQ
      DUE AMOUNT FOR 2003
NR
      DUE AMOUNT FOR 2004
NS
      DUE AMOUNT FOR 2005
NT
      DUE AMOUNT FOR 2006
NU
      DUE AMOUNT FOR 2007
NV
      DUE AMOUNT FOR 2008
NW
      DUE AMOUNT FOR 2009
NX
      DUE AMOUNT FOR 2010
NY
      DUE AMOUNT FOR 2011
ΝZ
      DUE AMOUNT FOR 2012
OA
      DUE AMOUNT FOR 2013
OB
      DUE AMOUNT FOR 2014
OC
      DUE AMOUNT FOR 2015
OD
       DUE AMOUNT FOR 2016
OE
      DUE AMOUNT FOR 2017
OF
      DUE AMOUNT FOR 2018
OG
      DUE AMOUNT FOR 2019
ОН
      DUE AMOUNT FOR 2020
OI
      TAXES
       "GRAND TOTAL TAXES 1900-2020"
OJ
OK
      Χ
OL
      Χ
      "Date of Last Tax Review"
OM
ON
      Χ
00
      Χ
OP
      Χ
OQ
      Χ
OR
       "Redeemed or paid by 1. Owner
                                         2. Investor
                                                      3. UNK 4. Change of address
                                                                                  5. USAR 200X (if
      changed Title from a NUSAR)
                                 6. Lot for sale by County
                                                             7. Certificate of title 20XX
                                                                                         8.
      Calles Developments 9. Fiduciary"
```