

# MI GEOCORRECT TOOL TUTORIAL

## HOW TO ACCESS GEOCODING CORRECTION:

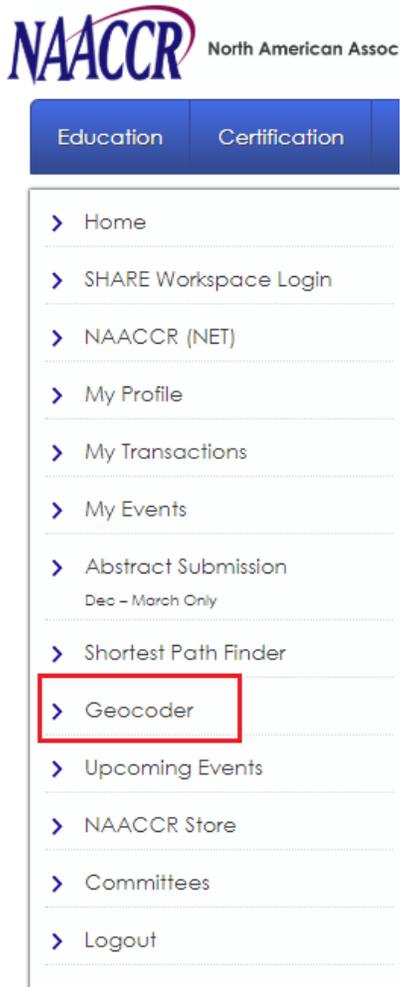
1. From the NAACCR homepage -> Research & Analytic Tools tab-> Analysis Resources & Tools Overview-> GIS Resources

The screenshot shows the NAACCR homepage with the following navigation tabs: Education, Certification, Central Registry Standards, Data & Statistics, Research & Analytic Tools (selected), and Virtual Pooled Registry. The 'ANALYSIS RESOURCES & TOOLS OVERVIEW' section contains three columns of links. The 'GIS Resources' link in the middle column is highlighted with a red box. Other links in the middle column include 'Analysis and Data Improvement Tools', 'Delay Adjustment', 'Confidentiality Issues', 'Path Lab Search Terms', and 'Crosswalks (Interoperability)'. The right column contains links for 'Annual Report to the Nation', 'Data Dictionary', 'National Data Exchange Agreements', 'Research & Data Use Blog (NAACCRReview)', 'Research & Data Use Cancer Surveillance Talks', and 'Virtual Pooled Registry'.

2. Select the 4th option under GIS Resources labeled “ NAACCR Geocoder”

The screenshot shows the 'GIS RESOURCES' page. The left sidebar lists various resources, with 'NAACCR GEOCODER' highlighted in orange. The main content area shows a list of resources: 'ADDRESS VALIDATION REFERENCE DATA - JULY 2015', 'AMERICAN COMMUNITY SURVEY CENSUS TRACT DATA', 'CLUSTER ANALYSIS SOFTWARE REVIEW', and 'NAACCR GEOCODER'. The 'NAACCR GEOCODER' section is expanded, showing a description: 'Due to a partnership between NAACCR, Texas A&M University, and the National Cancer Institute, NAACCR members have access to a single, uniform geocoding platform for open use by all NAACCR Full Member Registries. This system, Automated Geospatial Geocoding Interface Environment or AGGIE, system is accessible through your MyNAACCR log-in. The NAACCR AGGIE Geocoder is also integrated within the SEER DMS registry software package.' Below this, it says 'To access, first log-on to MyNAACCR.' The 'MyNAACCR' link is highlighted with a red box. At the bottom, there is a blue box with an information icon and text: 'There are resources on this page to assist with geocoding. For personal assistance or technical issues, please contact Dr. Reclinda Sherman at rsherman@naaccr.org.'

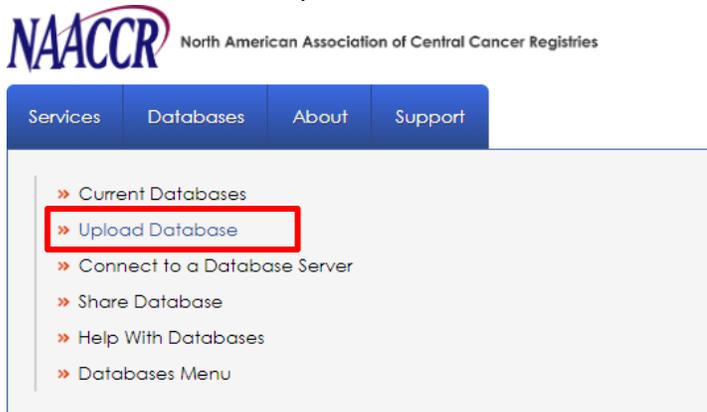
3. Select the “Geocoder” tab on the left side



4. If you have already geocoded a file on the website and did not delete the file after the geocoding you can go straight to step 11 [“Starting GeoCorrect Tool”](#).

#### Uploading Database:

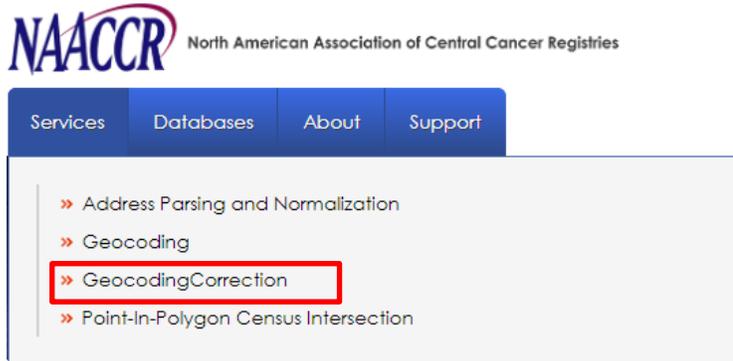
5. “Select Databases > Upload Database”



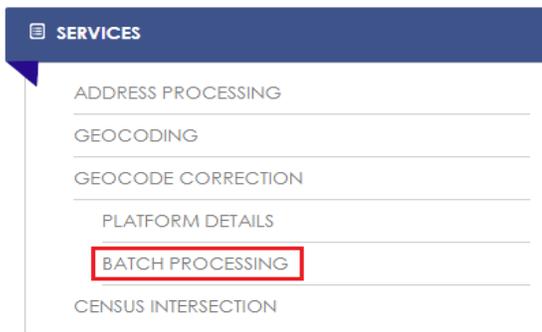
6. Click “Choose File” and select a file needing correction. Note that this file must already have been geocoded previously. If the file has not yet been geocoded please geocode the file here: [Batch Geocoding](#)
  - a. Optional Step:
    - i. If working with a large file you may want to download the geocoded file and create a new data file with only the records you wish to manually correct with this tool. Once that file is created come back and resume this tutorial at Step 5 and upload the newly created file.
7. Prior to clicking “Upload” be sure the Type, Columns, Text Separator and Text Qualifier defaults are all correct. If not, adjust them as necessary then click “Upload”.
8. Click “Validate Database”
9. If your file has multiple tables or tabs, ensure the correct one is selected for “Table:” then click “Validate Table”

**Starting GeoCorrect Tool:**

10. From top menu select “Services>GeocodingCorrection”



11. Select “Batch Processing, Manual Geocode Correction, or Start Processing Data”



## Geocode Correction

### When good geocodes go bad

Believe it or not, sometimes **geocoding services just don't work that great**. Despite our and others' best efforts, some address data just don't want to cooperate and you wind up with lots of geocodes off the horn of Africa (lat/lon = 0,0 - geocoding joke, terrible we know but sadly true).

Our geocoding correction services are here to help you turn those junk geocodes in geographic gold.

### Whip your geocodes into shape

#### Manual Geocode Correction

Unfortunately, most bad geocodes need to be manually touched to make them better. They failed to geocode well **because they were hard** and it may take an eyeball to see why. Our manual correction interface allows you to tear through your geocoded data at lightning speed, reprimanding those naughty geocodes until they act like the well-behaved address data you know they can be.

[Start Processing Data](#)

12. Select [Start - Step 1](#)
13. The following page shows your currently uploaded and validated databases. Scroll to the bottom and select [Next - Step 2](#) (the database file will be selected in Step 3)
14. From here you will see your database and table. If the selection is not what you desire, simply click the dropdown and change the selection. Once you are satisfied with this display, select [Next- Step 3](#)
15. Confirm that the Input Fields are mapped correctly to the fields in your file listed in the dropdown fields. The system will attempt to match this as closely as possible based on field names but you may need to use the dropdown to adjust some fields if mapped incorrectly. The "Other" field option is used to select an additional field used for analysis from your file. A common selection here is [Fsource] which will tell you the exact data source the current match came from. This field will be available only if you selected the optional "FeatureAddress" when geocoding. Once you are confident in the field mapping select [Next - Step 4](#).

### Input Fields

Id	AUTO_UNIQUE_ID_2021-06-29_paytonbaldridgegmailcom_sample_input_q ▼
StreetAddress	StreetAddress ▼
City	City ▼
State	State ▼
Zip	Zip ▼
Latitude	Latitude ▼
Longitude	Longitude ▼
GeocodeQualityType	GeocodeQualityType ▼
Source	Source ▼
OutputGeocodes	OutputGeocodes ▼
MicroMatchStatus	MicroMatchStatus ▼
PenaltyCode	PenaltyCodeSummary ▼
PenaltyCodeSummary	PenaltyCodeSummary ▼
Other	FSource ▼

- BookkeepingFlags
- CorrectionInfo
- NewAddress
- NewGeocode
- QA

<< Previous - Step 2

Next - Step 4 >>

16. Select **Start Process**

The screenshot shows the Geocoding Correction Portal interface. It includes a map on the left, a 'Displayed Points (0)' table, an 'Additional Potential Geocodes' table, a 'Build Address and Geocode' table, a 'Geocode Toolbox', a 'Query Selection' section, and a 'Query Results' table.

Displayed Points (0)	
441 Bauchet St Los Angeles, CA, 90012, USA	BuildingCentroid
441 Bauchet St Los Angeles, CA, 90012, USA	BuildingCentroid
441 Bauchet St Los Angeles, CA, 90012, US	BuildingCentroid

Additional Potential Geocodes (3.83333333333333356)		
441 Bauchet St Los Angeles, Los Angeles, CA, 90012	BuildingCentroid	SOURCE_NA_VTEQ_ADDRESSPOINTS_2016
441 Bauchet St Los Angeles, Los Angeles, CA, 90012	BuildingCentroid	SOURCE_NA_VTEQ_ADDRESSPOINTS_2015
441 Bauchet St Los Angeles, CA, 90012	BuildingCentroid	SOURCE_NA_VTEQ_ADDRESSPOINTS_2012
429-599 Bauchet St Los Angeles, CA, 90012	AddressRangeInterpolation	SOURCE_NA_VTEQ_STREETS_2012
425-599 Bauchet St Burbank, CA, 90012	AddressRangeInterpolation	SOURCE_NA_VTEQ_STREETS_2008

Build Address and Geocode				
A	+B	+C	+S	+Z
B	+B	+B+C	+B+C+S	+B+C+S+Z
C		+C	+C+S	+C+S+Z
S			+S	+S+Z
Z				+Z

Query Results										
ID	Address	City	State	Zip	Quality	Micro Match Status	Penalty Code	Penalty Code Summary	Misc	Details
1	441 BAUCHET ST	LOS ANGELES	CA	90012	BuildingCentroid	Match	MMMMMMMMMMMMMM1A	MMMMMMMMMMMMMM	FeatureClassBased	
2	2209 Rodingham Ln	College Station	TX	77845	BuildingCentroid	Match	MMMMMMMMMMMMMM1C	MMMMMMMMMMMMMM	FeatureClassBased	
3	603 N Hwy 77a	yoakum	N.	77995	AddressRangeInterpolation	Review	MMMMMMMMMMMMMM	MMMMMMMMMMMMMM	FeatureClassBased	

## How to Use the Geocoding Correction Portal

The Geocoding correction service is an optional way to correct your geocode if you get less than optimal results from the output of our geocoding process. Window segments can be minimized by clicking on the top left minus sign for each. Below is a brief summary of the steps with more detailed information following:

- 1) The first thing to be aware of is that when this tool is open you are directly accessing your database that you have uploaded to the site. Anytime you “store” a correction it will immediately update the database you have uploaded. If you open the tool and process the first five records and click “store” for each, when you download your database from the site it will contain the correction information for those five records. This has been a source of confusion in the past, but no exporting is needed from this tool. All the stores/saves are performed in real time to the original database.
- 2) Upon opening the correction tool the first record will be highlighted in the “Query Results” window and details displayed in the editing windows. A point will be placed on the map showing the TAMU geocode indicated with a dot and any Google findings indicated by capital letters.
- 3) The user can select the NAACCR geocoder (TAMU) result, select the Google result, or manually place a pin on the map if they know the location by simply clicking on the map.
- 4) Once you are confident in the correct point click one of the icons to the right of that point in the “Displayed Points” window. The icon with the green arrow will store the correction and move to the next record while the next icon will store the record and remain on it. The trash can will delete the points on the map, but not the record in your database or

the geocoded information. The corrections will now be in your database if you download it again.

- 5) You can see what records have been processed at any time by clicking <Filter Records> in the “Query Results” window at the bottom, this will refresh the table and indicate processed records by a red checkmark in the Details column to the far right. You can also filter to only see records that have not been processed by checking the ‘Non-Processed Only’ checkbox and clicking <Filter Records> again to refresh the table.

## Map

You can click on the map and move your view around to determine where the pin should be. A new point can be added if you click once. This will prompt a box for you to select why you would like to place the point and accuracy regarding it. The map can be zoomed in and out with either your mouse or the plus and minus sign in the bottom right corner of that window.



## Displayed Points

Description of points that should be currently visible on the map view. You can compare multiple sources for the accuracy desired. There is no need to delete any of these points as only the point you actually store will be in your database, until then they are just for reference. The silver bin with → will save the corresponding pin as the correct information to your database and

move to the next record in the file. The silver bin will save the information to the database and remain on the current file. Trash can with **x** will “Delete” the point. The label of these signifiers can be acknowledged by hovering over each symbol with your cursor. Remember that deleting a point only clears it from the map and does not update your database in any way. If you accidentally delete a Google point you can always simply go to the next record and then back again to refresh the Google and TAMU points on the map. Note that this will not refresh any points you manually added unless you clicked “Store and Next” or “Store”. At the top of the Displayed Points window you have the option to Zoom to Extent, Delete All Points, and Export to CSV (not currently enabled). Clicking on the pin symbol next to it’s details will zoom to that point.

- *Note: Points added from the Additional Potential Geocodes section will likely be marked as an Unknown Source with a “?” symbol.*

Displayed Points (3)						
Tools						
		441 Bauchet St Los Angeles , CA, 90012, USA	BuildingCentroid			
		441 Bauchet St Los Angeles , CA, 90012, USA	BuildingCentroid			
		441 Bauchet St Los Angeles , CA, 90012, US	BuildingCentroid			

### Additional Potential Geocodes

More options can be found here with quality type listed. These points will be available if you have a data set that was run with exhaustive search enabled. This is essentially a list of all data sources that we were able to find the address in.

Additional Potential Geocodes (3.333333333333335)			
	441 Bauchet St Los Angeles , Los Angeles , CA, 90012	BuildingCentroid	SOURCE_NAVTEQ_ADDRESSPOINTS_2016
	441 Bauchet St Los Angeles , Los Angeles , CA, 90012	BuildingCentroid	SOURCE_NAVTEQ_ADDRESSPOINTS_2013
	441 Bauchet St Los Angeles , CA, 90012	BuildingCentroid	SOURCE_NAVTEQ_ADDRESSPOINTS_2012
	429-599 Bauchet St Los Angeles , CA, 90012	AddressRangeInterpolation	SOURCE_NAVTEQ_STREETS_2012
	425-599 Bauchet St Burbank , CA, 90012	AddressRangeInterpolation	SOURCE_NAVTEQ_STREETS_2008

## Build Address and Geocode

Hovering over each letter and segments reveal different parts of the address. A is the component of the street address, c is the city, s is the state, and z is the zip code. Lightly click on the white box once and select the pieces of the full address desired. Notice the plus signs with multiple letters. This box will include the segments together as an addition to the address. The box on the right seen as “+a+c+s+z” includes all parts of a full address. Once you have built the desired address, click on the yellow symbol to receive a geocode. Clicking the button to geocode will place a new point on the map. You can modify the original address here by typing the complete address into the box, then clicking on the yellow symbol to place a pin

Build Address and Geocode				
	+a	+C	+S	+Z
a	+a	+a+C	+a+C+S	+a+C+S+Z
C		+C	+C+S	+C+S+Z
S			+S	+S+Z
Z				+Z
Geocode:	<input type="text"/> 			

## Geocode Toolbox

This toolbox allows you to geocode and place a pin of a segment of the original address. For example, if you place “LOS ANGELES” under the city field and select geocode it will output a point with the quality of CityCentroid. Entering the zipcode in the ZIP field and clicking the geocode icon will output a point with the quality of “USPSZipCentroid”, etc. You can also modify the original address field here to place a pin. This can be useful to correct spelling errors, missing elements, transposed numbers etc.

Geocode Toolbox		
Original:	<input type="text" value="441 BAUCHET ST, LOS ANGELES, C"/>	
Address:	<input type="text"/>	
City:	<input type="text"/>	
State:	<input type="text"/>	
ZIP:	<input type="text"/>	
Intersection:	<input type="text"/>	
Named Place:	<input type="text"/>	

## Current Record

A breakdown of each address component on the selected point is presented. You can change which record is presented by clicking on the double back arrow to see the First Record, single back arrow to see Previous Record, and silver bin to Update and Skip Record. The silver bin with an arrow and red slash mark will Mark it Non-fixable and Skip, single forward arrow will go to Next Record, and double forward arrow will go to the Last Record. You can also select a record directly by clicking on it in the “Query Results” window. Clicking on the details at the bottom will open a new browser window that includes code (this can also be opened under the far right side of Query Results window)

Current Record	
◀◀ ◀ ◻ ▶ ▶▶	
ID	1
Address	441 BAUCHET ST
City	LOS ANGELES
State	CA
Zip	90012
Quality	BuildingCentroid
Misc	FeatureClassBased
Details	<a href="#">details</a>

## QA Notes

Most of the QA Notes section is designed for use with other code and not really beneficial for customer usage. The main section here is the textbox in the “Status” tab. Any notes here will be kept on the QANotes field that will be added to that specific record. An example of a useful note here would be “Corrected street level result to rooftop point based on visual verification of satellite imagery”. If specific methods are applied during manual correction it may be beneficial to develop codes for each type of correction which could be saved in this field to identify what method was applied for each correction.

### QA Notes

Status   Input   TAMU

Correct Geocode  
 Incorrect Geocode - Fixable  
 Incorrect Geocode - Not Fixable

Confidence

## Query Selection

Your data source is displayed and your data selections can be edited through the dropboxes. Match Status, Qualities and Records per page can be changed to reflect the desired output. Make sure to keep Match Status and Qualities set to All if you want to go back and forth between records and avoid limitations.

The screenshot shows a 'Query Selection' control panel with the following elements:

- Data Source: testAddCorrCen.csv
- Match Status: All (dropdown)
- Qualities: All (dropdown)
- Records per page: 100 (dropdown)
- Non-Processed Only:  (checkbox)
- Auto-Geocode:  (checkbox)
- Filter Records: (button)

## Query Results

This should include all records of your database selected. Note that you go through them individually to select corrections. You can filter these records by Match Status, Quality, and non-processed by checking the appropriate checkbox and clicking <Filter Records> to refresh the table. The Auto-Geocode option will place a Google geocoded point on the map and is checked by default. The Misc column will contain the data from the field you selected in the “Other” column in Step 3 of the process. This can be useful if you have multiple identifying information about addresses you would like available during the correction process. Clicking <Filter Records> at any time will display a red check mark to the far right of any records that have already been processed and saved if the “Non-Processed” box is not checked, else those records will be removed from the list.

ID	Address	City	State	Zip	Quality	Micro Match Status	Penalty Code	Penalty Code Summary	Misc	Details
1	441 BAUCHET ST	LOS ANGELES	CA	90012	BuildingCentroid	Match	MMMMMCMMMFMMAA	MMMMMMMMMMMM	FeatureClassBased	
2	2209 Rockingham Ln	College Station	TX	77845	BuildingCentroid	Match	MMMMMCMMMFMMAA	MMMMMMMMMMMM	FeatureClassBased	
3	603 n Hwy 77a	yoakum	TX	77995	AddressRangeInterpolation	Review	MMMMMCMMMFMMAA	MMMMMMMMMMMM	FeatureClassBased	
4	443 So. Sate St	Los Angeles	CA	90033	BuildingCentroid	Match	MMMMMCMMMFMMAA	MMMMMMMMMMMM	FeatureClassBased	
5		LOS ANGELES	CA	90026	USPSZipAreaCentroid	Non-Match	MMMMMMMMMMMAA	MMMMMMMMMMMM	FeatureClassBased	

## FRIENDLY REMINDER

Most registries are already familiar with this as Google is commonly used when correcting and verifying your geocodes, but anytime a point is placed on the map by Google, they have and own that address information. This correction tool works the same way as you pulling up Google maps and entering the address to get the coordinates. The following information is what is sent to Google by the tool:

- Street Address
- City
- State
- Zip

Only those components from your file are sent, Google has no access to any other data associated with the record.