

## WV Geocoding Service

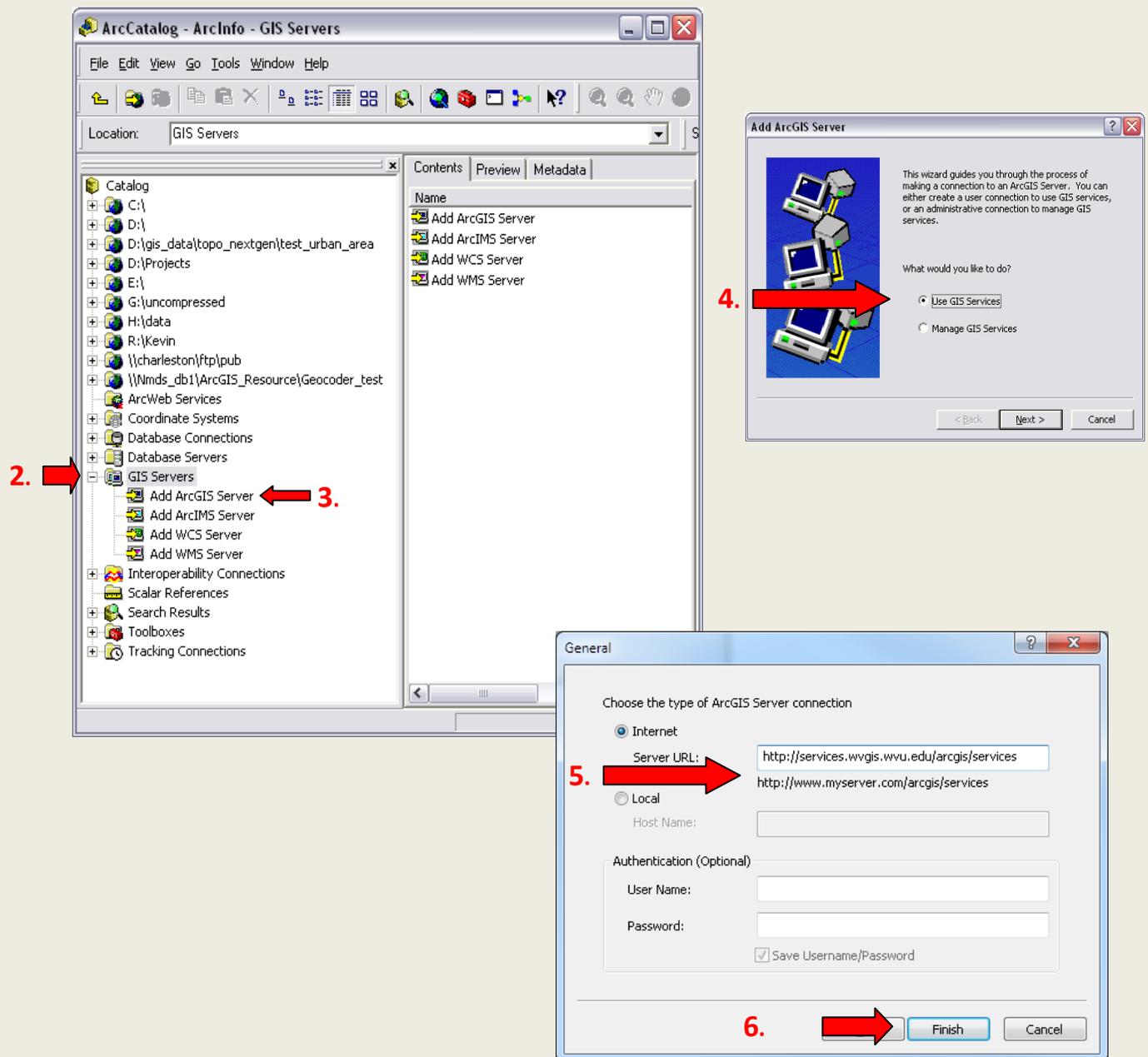
**Introduction:** West Virginia is nearing completion of the Statewide Addressing and Mapping project, a five year effort to update and address every structure in the state. The SAMB project has resulted in the creation of many important GIS datasets, including point structure data and road centerline data. With the cooperation of WVGISTC, Division of Homeland Security & Emergency Management and WVSAMB these two datasets have enabled the creation of a new geocoder for West Virginia.

There are two locator services available from the WVGISTC, the WV Site locator and the WV Street locator. The WV Site locator is based on the point location of addressed structures, the WV Street locator is based on the addressed SAMB Street dataset. The WV Site locator service can offer a *direct match* of the physical address and location of the queried address. The WV Street locator service can provide an estimated match of the queried address. Both services will offer a highly accurate geocoding service as compared to any other commercial geocoding service available to West Virginia. Although the new locator services offer highly accurate returns, not all addresses for WV are included in the locator services and results will vary between counties. Because the addressing project is on-going and county data is constantly being updated, the WVGISTC plans to update the locator services quarterly with new data.

**How to Setup the WV Locators:** These instructions have been produced using ArcGIS 9.3 suite of products. The locator services can be used to process single addresses or many addresses (bulk submissions) in ArcMap. Before you start geocoding, you must connect to the geocoding services to be used. Follow the instructions below to connect the WV Locators in ArcCatalog.

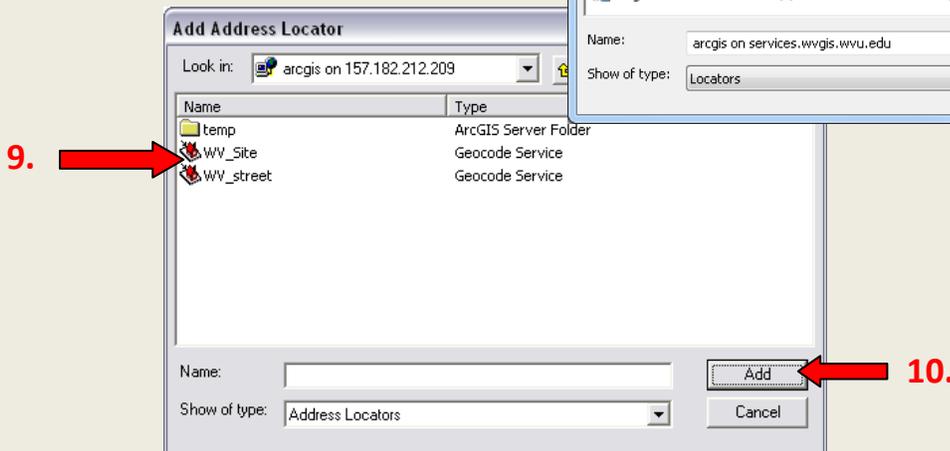
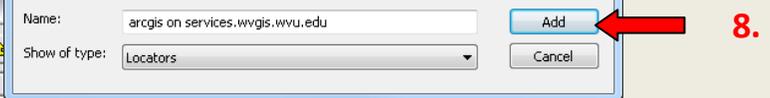
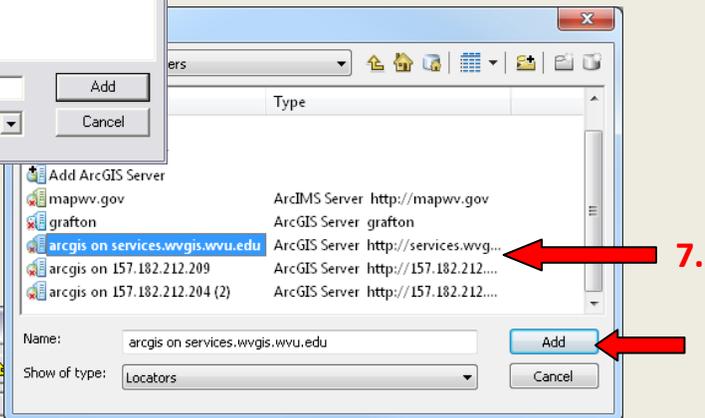
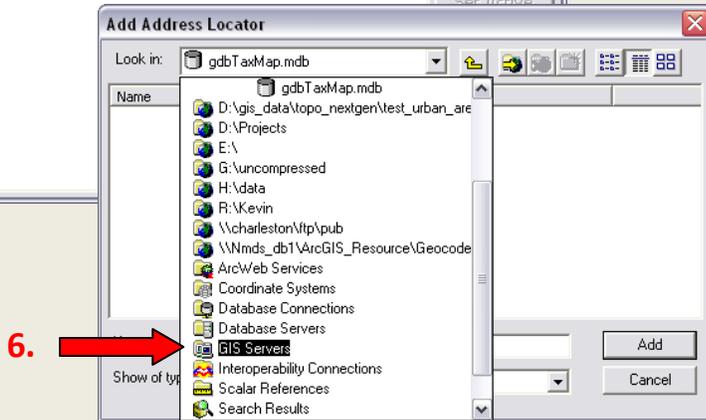
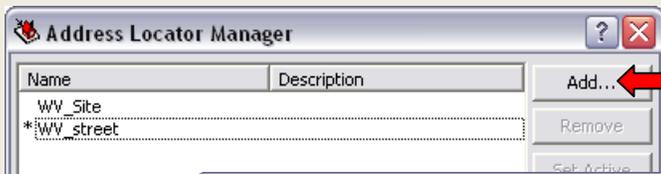
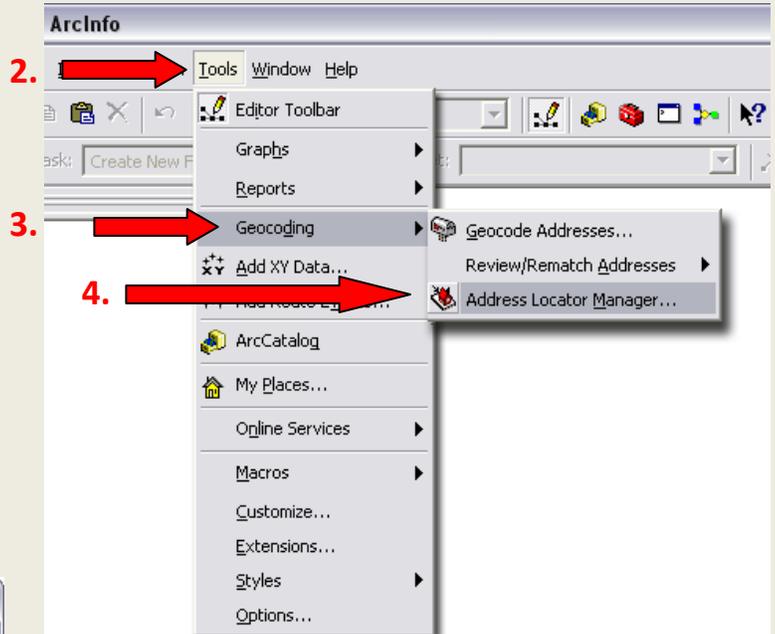
**ArcCatalog: add an ArcGIS Server**

1. Launch ArcCatalog
2. Click GIS Server
3. Click Add ArcGIS Server
4. Select "Use GIS Services"
5. Enter the address for Server URL: 157.182.212.204/arcgis/services
6. Click Finish



## ArcMap: add locator

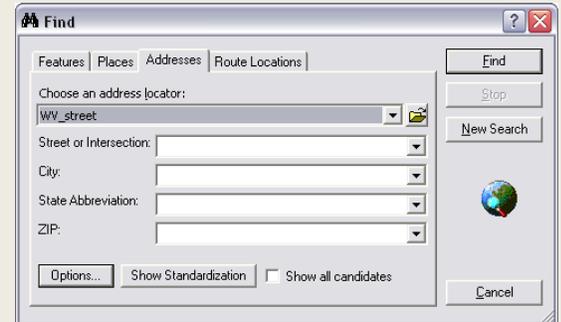
1. Launch ArcMap
2. Click > Tools
3. Click > Geocoding
4. Click > Address Locator Manager
5. Click > Add
6. Select > GIS Servers
7. Select "arcgis on 157.182.212.204"
8. Click Add
9. Select WV\_Site and/or WV\_Street
10. Click Add
11. Click Close



**How to Use the Locators:** Once you have set up the locator services in Arc Catalog, you can begin to use them within ArcMap. You can either use a new arcmap project or an existing project.

**Single Address:** If you only need to locate a single address, The Find tool  can be used to geocode.

1. Click the Find Tool
2. Click the Address tab
3. Choose the locator `wv_site` or `wv_street`
4. Once you choose the locator, the menu will allow you to enter the required address information. (Be sure to enter in all fields.)
5. Click Find



**Bulk Addresses:** Multiple addresses can be geocoded directly in ArcMap using tables with the locator services.

1. Add a table to ArcMap
2. Click Tools
3. Click Geocoding
4. Click Geocode Addresses
5. Choose a locator, click OK

The table must comply with the minimum required fields for the selected locator (As listed below). The locator returns an event table in the ArcMap session. This event table can then be saved to a permanent shapefile. The locator service returns new fields (Listed below) associated with the event points created that allows you to determine the accuracy (or match quality) of the results.

Required fields:

**WV\_Site:** street address, zip code

**WV\_Street:** street address, city, state, zip code

**Returned Results: (From the ESRI ArcMap Help)** After a table of addresses is geocoded, the output feature class will contain a copy of the address fields from the address table that are used for rematching. The names of this set of address fields are prefixed with "ARC\_". When an address is modified during rematching, the new address will be saved in these fields. In addition, here are the other fields created in the output feature class for the geocoding results:

- *Status* - A code indicating whether the address was matched. This attribute has values of "M" for matched addresses, "U" for unmatched addresses, and "T" (tied) for addresses for which there were more than one candidate with the best match score.
- *Score* - The match score of the candidate to which the address was matched.
- *Match\_type* - A code showing how an address was matched. "A" for automatically matched or rematched. If the geocoded feature classes is [rematched](#) using the Interactive Rematch dialog box, you may see other values including "M" for manually matched or unmatched using the Match or Unmatch button. "PP" stands for Pick by Point. The address was matched to the click point using the [Pick Address from Map tool](#) in the Interactive Rematch dialog box with ArcMap. And "PA" stands for Pick by Address. That means the address was matched to closest address with the Pick Address from Map tool. You may group the results based on this attribute to show how the addresses were matched or use the grouping to select records for rematching.
- *Side* - The side of the street to which an address was matched—if the address locator that was used to match the table contains address information for both sides of the street. This attribute has values of "L" for the left side of the street, "R" for the right side of the street, or nothing if the address locator could not determine the side of the street.
- *Match\_addr* - The address that the matched location actually resides based on the information of the matched candidate. For example, an input address "123 Main St N" is matched to a candidate with the suffix direction "NW" and all other components matched correctly. The Match\_addr field will contain "123 Main St NW" as the actual address that was matched.

There are also some optional fields if the Output Fields options were checked in the address locator's property page:

- *Pct\_along* - For address locators that use feature classes with polyline geometry as reference data, the percentage along the matched feature at which the matched address is located.
- *Ref\_ID* - The ObjectID of the matched feature.
- *Stan\_addr* - The standardized address.
- *X* - The x coordinate of the matched address.
- *Y* - The y coordinate of the matched address.