MEMORANDUM

To: Dr. Jeff LaMondia, Auburn University, CIVL 6410

From: Lan Liu

Date: January 27, 2017

RE: Basics of ArcCatalog and ArcMap

I. Purpose

This assignment is an introduction to the basics of ArcGIS. Student needs to use ArcMap to create map with the data source.

II. Methods of creating a map

A large map was created from five layers and an inset map was created from a data frame with two layers. The final layout was made with following steps:

- First, the data was downloaded and exported into a folder. And five layers (CAMPO Roads, Cap Metro Routes, Travis County CBGs, Austin City Limits, and Cap Metro Service Area) were selected to show up in ArcGIS. A New Data Frame was added with two layers (CAMPO Counties and Travis County CBGs, respectively) to create an inset map.
- Second, in order to make the map look clearly. The symbol color and the width of symbol in Symbology of each layer was changed in properties. And North Arrow, Scale Bar, and Legend were inserted as the required elements. Transparent was set to 50% in Display from Properties of the layer to distinguish each layer clearly. After this step, all five layers can be viewed clearly from each other in a large map.

The data used to create the map comes from the folder named lab 1. The full citation is referred to the layout.

III. Findings

Transparent is useful to figure out the different layers clearly. However, the color will not match the color in legend exactly since the transparency changes the overlap area into a "new color". This circumstance creates confusion for people who look at the map since they can not find the match layer's name with a color made by overlapping.

The process of inserting a scale bar will show the scale of the map in a straight and easy way. However, when the scale bar is inserted into the inset map, mouse is needed to first select both New Data Frame in Table Of Contents and Data Frame in Layout View before inserting the scale bar. Otherwise the scale bar will be added into the large map instead of inset map.

This layout highlights the Cap Metro service area in Travis Counties, TX. One can find that Cap Metro Service Area is only located at the north of Travis County. It is interesting to consider if the population has the same access to the Cap Metro Service Area.

IV. Caveats

Distribution of population within Travis Counties is unknown. The data about population in Travis Counties may help to explain the service area location.

V. Appendices

A large map with five layers and an inset map are presented in the following page.