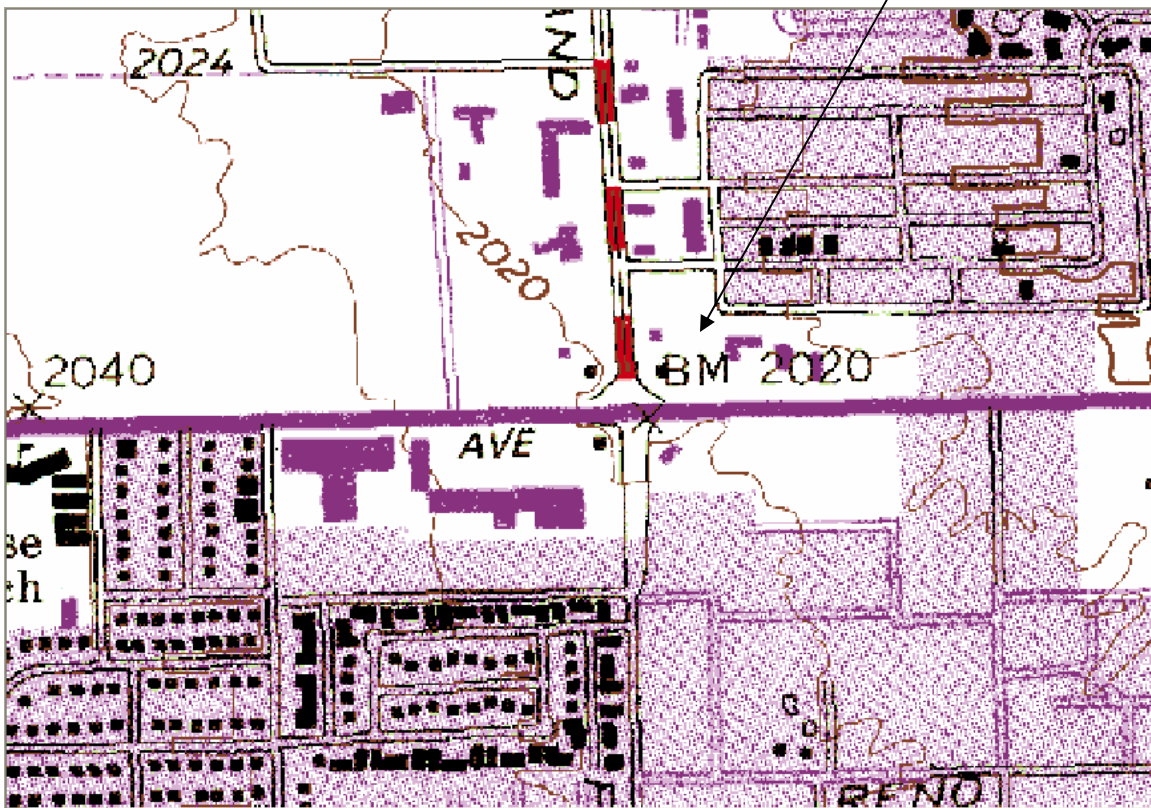


**GEY 430/640 Geographic Information Systems (GIS) – Theory and Application  
Homework #2  
Due February 26, 2004 (at beginning of lecture)**

Ground Truthing Results: This is sometimes necessary to make your dataset is accurate. This homework assignment will take you on an adventure to locate Survey benchmarks and modern GPS sites.

**Part I:** Location Survey Benchmarks can be a challenge even for the best mapper. You will need to download the Las Vegas SW and Las Vegas SE Quadrangles (DRGs) from the Keck website. Benchmarks can be identified on these maps by an X and the initials BM (see below).



**Part II:** Locating a modern survey marker. These days we don't rely on brass plates to tell us where we are located. There has been an elaborate GPS (Global Position System) set up around the world. In this part of the exercise you will go to the National CORS web page (<http://www.ngs.noaa.gov/CORS/>) and locate GPS sites.

**GEY 430 Students:**

**Part I:**

You will have to physically locate 3 benchmarks. Record the type of benchmark, the elevation, any other information on the benchmark, and the physical location of the benchmark (e.g., corner of Tropicana and Paradise). You should print out a small version of the DRG, but make sure you have zoomed in enough to see where the benchmarks should be located. Type up your results and hand them in.

**Part II:**

Go to the CORS web page and location the Las Vegas GPS site. What is the range of the Las Vegas site? What is the sampling rate of the site? Get the coordinates, Data availability, and print out the Data sheet of the site. Now do the same for 2 more sites of your choice. Type up your results and hand them in with any print outs.

**GEY 630 Students:**

**Part I:**

You will have to physically locate 3 benchmarks. Record the type of benchmark, the elevation, any other information on the benchmark, and the physical location of the benchmark (e.g., corner of Tropicana and Paradise). You should print out a small version of the DRG, but make sure you have zoomed in enough to see where the benchmarks should be located. Type up your results and hand them in. In addition, I would like you to do a little research. Hand in a 1 page (single spaced, 10 pt min font) write up on the history of benchmarks.

**Part II:**

Go to the CORS web page and location the Las Vegas GPS site. What is the range of the Las Vegas site? What is the sampling rate of the site? Get the coordinates, Data availability, and print out the Data sheet of the site. Now do the same for 2 more sites of your choice. In addition, go to the Las Vegas Water District Web Page ([http://www.lvvwd.com/html/eng\\_gps.html](http://www.lvvwd.com/html/eng_gps.html)). What other GPS sites are maintained in Las Vegas? Where are they located? Type up your results and hand them in with any print outs. Hand in a 1 page (single spaced, 10 pt min font) a detailed description on Las Vegas Water district site.