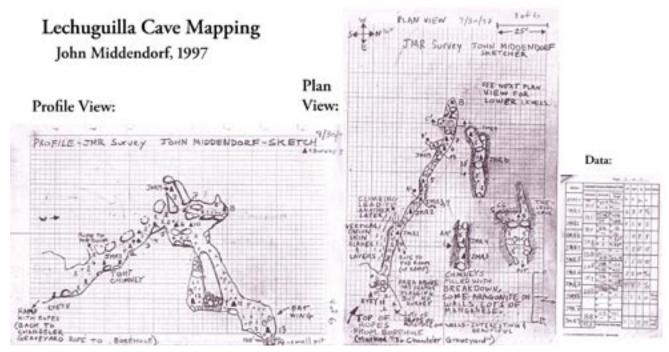
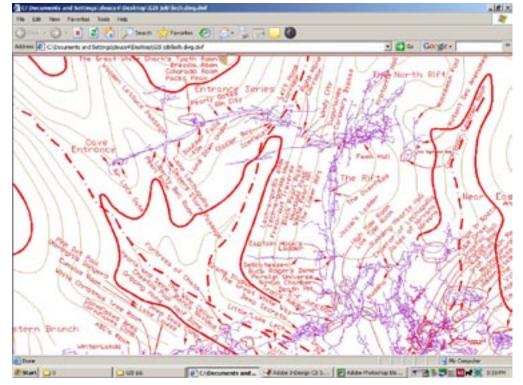
Mapping, GPS, and GIS Additional work by John Middendorf

Cave Mapping: During seven day underground expeditions in Lechuguilla Cave in New Mexico, because of my attention to detail I was chosen to be the "sketcher" for the mapping of the cave. From the Carlsbad Cavern National Park literature: "The sketcher is the most important person on the survey and has the most responsibilities" and goes on to discuss the responsibilities of the sketcher as to the accuracy and completeness of the survey. Below are samples of my work underground:



Such Data is used to put together plotted maps, using COMPASS:



Roxy Paine Project

My brother, a well known artist in New York City, asked me to help him with an early project using GPS. I performed all the technical work with a donated GPS unit. The project was entitled, "Where I'm At", and linked the mobile GPS unit to a cell phone which called in periodically and mapped his position on a giant map of New York City. The translation of the GPS coordinates to xy data for the lazer pointer was quite complex and was programmed in Pascal.

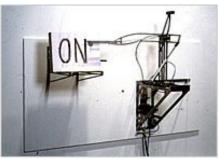
Roxy Paine April 29 – June 3, 1995



<u>Placard Flinger</u>, 1995 steel, pneumatics, cardboard, ink 48 × 60 × 24 inches



<u>Plug-in Painting</u>, 1995 linen, plastic, aluminum, with 39 moulded brushstrokes 120 × 72 × 4 inches



<u>Placard Flinger</u>, 1995 (detail)

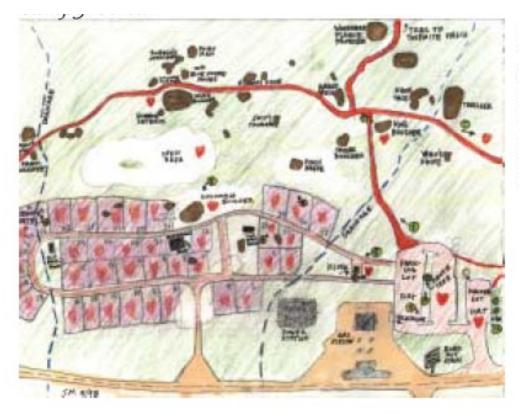


Where I'm At, 1993-95 black and white photograph, desk, computer with laser pointer, GPS unit, cellular phone photo: 96 × 96 inches desk: 30 × 30 × 60 inches

Above Project: "Where I'm At" bottom right.

Camp 4 mapping project.

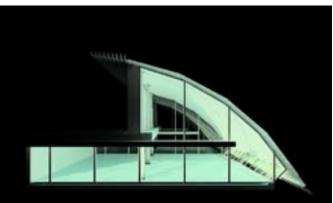
On another project, I was asked to provide a map of the climber's campground in Camp 4. Below is the "favorite places" map. Below is my sketch provided.

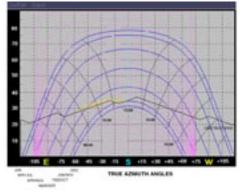


Left: Middendorf's "Favorite Places" map of Camp 4 which was instrumental in the legal argument which helped prevent a major area of Yosemite Valley from becoming developed.

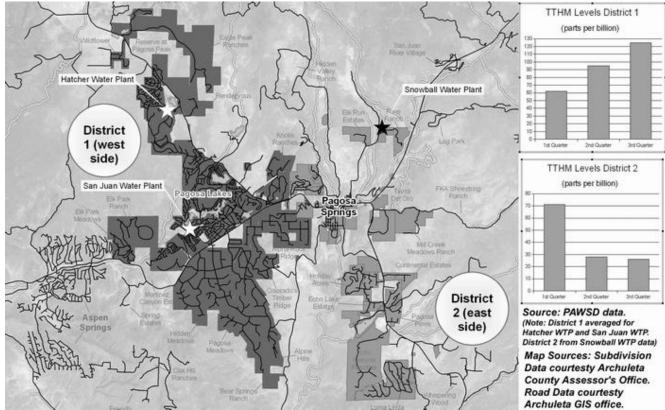
Various Harvard Projects:

During my Master's Degree at the Harvard Graduate School of Design, we used GPS in several projects. Below left is a lightscape model digitally built using Studio3D and Lightscape using specs on a Richard Roger's Building. The GPS was used to accurately position the location for sun/shade analysis. Several other projects (not shown) used GPS to build accurate base models for architectural designs.

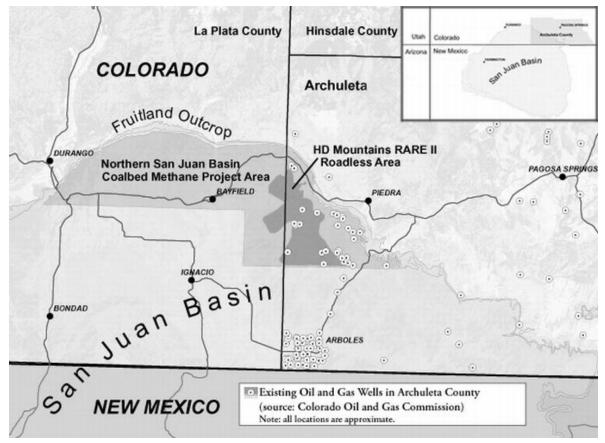




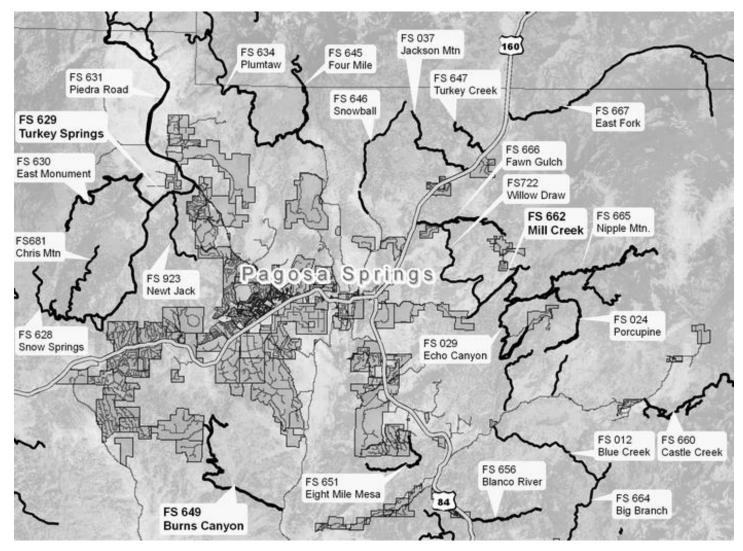
Selected Maps created for the Pagosa Sun Newspaper to illustrate articles:



Above: Water Map showing districts with unhealthy TTHM levels.



Above: Oil and Gas Locations in Archuleta County, Colorado



Above: A map showing local names for Forest Service Roads around Pagosa Springs, Colorado