



Executive Summary

The process of land surveying as it is known today is about to change in a brand new and exciting way. The Lamp, Rynearson & Associates' Metro Area Reference Network project, otherwise known as MARN, is a network of GPS (Global Positioning System) base stations. This GPS base station network is used in conjunction with a rover unit to make the work of land surveyors more accurate and efficient. MARN involves the sending and receiving of signals between multiple, stationary base stations, assisting those using rover units in the field in determining survey coordinates or location more accurately and effectively.

Typically, most survey field crews take a single mobile base station and set it up over a known point to get coordinates. Once it is set up, data for the known point can be input into the base station.

With a rover, or remote unit, a surveyor can typically go about 6 miles from the unit and still receive information. With the MARN system, there is no need to set up a base station. The rover is turned on at the project site, an internet connection is established, and the corrections are received. The equipment is running and ready to go within five minutes, versus the half hour or more it would take to set up and tear down a typical base station. From that point on, the surveyor can go anywhere within the network, or within a radius of 35 miles from any base station.

MARN's major benefit is that a great deal of time can be saved by avoiding tedious set up and break-down of mobile base stations by survey crews. The MARN concept is a break-through in survey technology; benefiting both firms responsible for field work and the clients they serve.