

Survey Monument Preservation In a Disaster Cleanup

By: **Michael L. Quartaroli, PLS**
mike@quartaroli.com

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Disasters, whether they are wildfires, earthquakes, tornadoes, hurricanes or floods, are occurring more frequently and are much more severe than before. Land surveyors are the stewards of the nation's property boundaries, and as such, are entrusted with maintaining and protecting them. Land surveyors must be included in any disaster cleanup effort for the purpose of preserving survey monuments.

Survey monuments are physical markers indicating the location of property corners and geodetic control points. Survey monuments are visible and tangible markers that landowners can see and touch. They bring meaning to property corners, property boundaries, and property ownership. Survey monuments fix property lines, road right-of-way lines, utility easement lines, and various districts and agency boundary lines on the ground. The ownership of land, and consequently the ability to define boundaries is dependent on survey monuments. Ensuring that boundaries and corners are protected means that the location of boundaries are readily identified. This allows owners and agencies to quickly rebuild improvements in the correct location without delays and costs associated with re-surveying land and replacing survey monuments.

Survey monuments consist of many different materials and settings and may not be readily visible to the un-trained observer. Generally, a property corner may be marked with steel rebar or iron pipes of various diameters and lengths, railroad spikes, wood hubs, lead and discs, stakes or fence posts. Typically, but not always, survey monuments may be identified with a brass tag, plastic cap, or aluminum/brass cap with the land surveyor's license number. Survey monuments may be found on the sidewalk, in the street, or at the actual front and rear property corners. Generally, in urban or agricultural areas, survey monuments are set below the surface of the ground for their protection. In rural areas, a portion of the survey monument may remain above the surface.

Geodetic control monuments are established as permanent physical markers placed in stable ground and precisely located. Horizontal and vertical geodetic control monuments are painstakingly constructed and surveyed by various government agencies. These survey monuments provide a nationwide coordinate system and serve as the basis for accurate maps, surveys for development, infrastructure, and geographic information systems (GIS). Geodetic control monuments are predominantly set along main transportation corridors in secure locations and may easily cost \$25,000 to set, measure, and publish the results.

Although often overlooked, all survey monuments are critical for a successful rebuilding process, especially on the smaller lots or parcels where setback limits must be met along with other building standards. Realizing the importance of survey monuments is

the first step in helping to preserve them. Survey monuments are an important and critical asset that belong to the public and government alike. Survey monuments are in the Public Domain and must be preserved for all to benefit.

The cleanup contractor is there to help the landowners. He or she should NOT destroy one of the most important assets landowners have – the survey monuments marking their property corners. The effort to preserve survey monuments will NOT hinder or delay the cleanup process, BUT in fact, will ensure the rebuilding process to be a success. Survey monuments are the foundation of any project. Whenever a survey monument is destroyed, the location of property lines, and therefore ownership, are brought into question. When a survey monument must be replaced, it delays the rebuilding efforts and incurs significant expense. In addition to the loss of time, the property line location may be uncertain in some cases. These are negative consequences. It costs much less to preserve a survey monument in place than it does to replace it after being destroyed. Survey monuments that have survived a disaster should not be destroyed in the cleanup process by ignoring their existence and failing to recognize their importance.

It is in the public's interest to preserve survey monuments by including land surveyors in the pre-cleanup discussions and meetings with all governmental agencies, clean-up companies, landowners, and various contractors. Once the disaster zone is determined to be safe, land surveyors should be authorized to enter the disaster zone ahead of the cleanup crews to locate, measure, protect, or preserve the position of the survey monuments. The Right-of-Entry forms must include language explaining the importance of preserving survey monuments and authorizing land surveyors to enter the property, if needed.

Survey monument preservation requirements and standards must be incorporated into disaster relief protocols with all federal, state, and local governmental agencies. FEMA's definition of "cleanup," and the list of services provided by and paid for by FEMA, must be amended to include survey monument preservation performed by licensed land surveyors prior to, or concurrent with, debris cleanup.