Surveyor

The importance of initial survey in determining the success of site development

Gregory Gould

Hancock Survey Associates, Inc.

So often I am asked to estimate the cost of performing an existing conditions survey on a parcel of land slated to be transformed into a definitive subdivision, Chapter 40B housing project, or mixed-use development, just to name a few. Typically, and prior to performing my own research, I meet with the Project Engineer in order to discuss project specific goals, timelines, and any potential hurdles that we may face throughout the design and permitting process. I begin to develop an understanding of the size and scope of the project, the experience of the client, and the role our firm is expected to play in the development of the land. Almost simultaneously, I realize how important a role my initial survey will play in determining the overall success of the project.

It can be confusing when hearing comments regarding the estimate of the initial survey being too high, yet it is only a small fraction of the overall soft costs for the project, including conceptual plans, site design, and permitting. The initial survey is an even smaller fraction when considering the client's overall investment in site development. The expression "measure twice, cut once" certainly comes to mind; careful planning and solid preparation should never be overlooked. My suggestion, however, would be to approach the existing conditions phase of a project from the "measure once (with confidence), cut once" mind set.

I can think of several instances when Engineers were asked to perform site design from information provided in fragments, sometimes collected from multiple sources. On almost all occasions, as the design process progressed, inadequacies and omissions were found in the provided data, some even being discovered later on during the construction phase of the project. This causes design revisions and delays construction, ultimately affecting the client's bottom line. These deficiencies were not the result of the survey firm preparing a poor product, but because the design team was using the data in a way that wasn't cohesive or current. Heeding the advice of the surveyor and executing a solid initial survey at the beginning of the project would have saved both time and money.

Performing thorough title research and having a detailed field survey can prove to be a wise choice for a developer as the project progresses. Discovering title deficiencies or conflicts in a parcel's boundary at the beginning of a project will allow for design accommodations before progressing to a point of no return. For example, on a recent project a developer prepared conceptual plans for a definitive subdivision based on the town's assessors maps, after which they decided to proceed with the existing conditions survey and site design. Shortly into the existing conditions survey, and more specifically the associated title research, it became evident that there were major discrepancies in the parcel's boundary; a large portion of the land was not under the control of the current property owner and, thusly, couldn't be included as part of the subdivision. This same type of situation can rear its ugly head when dealing with previously unknown easement rights. Investing some time into a parcel's title history, prior to even the conceptual phase of the project, can produce the kind of information that will add confidence to your decision on whether to proceeding with the development or not.

As most all projects are designed in CAD, the software of today has become much more organic and is very dependent on workflow. The software is designed to begin with a solid initial survey, including properly built existing surface models, upon which Engineers perform site design. Within the design process, proposed surfaces are created that the Land Surveyor will, in turn, use to provide contractors with proper grading in the field. If these networks are being utilized correctly, a revision in site design by Engineering will automatically be updated in all aspects of the drawing, negating the need for manual updating, saving time, money, and the potential for introducing human error. Trying to pull together fragmented data, without the proper workflow, means using the software in a way in which it is not designed to be used. A good survey base drawing can also be the foundation for other required plans as the project progresses; ALTA/NSPS title insurance plans, certified plot plans, and site as-built plans just to name a few.

Spending a little more time and attention on the initial survey can put a project on the fast track to success. Including the Land Surveyor in the Project Team at an early stage in development will add perspective to the project and may be the key to smooth site development.

Gregory Gould, PLS is a project manager for Hancock Survey Associates, Inc., Chelmsford, Mass. and moderator of the Hancock Young Professionals Group.