

Lessons Learned: Applying Engineering Solutions to Future Municipal Projects

Infrastructure improvements are as important to communities as periodic medical checkups are to individuals. Improvements accommodate community growth, allow communities to benefit from new materials and processes, and prevent today's minor deterioration from becoming tomorrow's safety hazard. Unlike a checkup, though, an infrastructure improvement project must take into account hundreds, perhaps thousands, of residents and commuters. Care must be taken to disseminate project information proactively and to minimize disruption to residents' lives.

Gwinnett County demonstrated a keen insight into potential infrastructure improvement challenges during a recent project on behalf of its Liberty Heights Community. Foresight and proactive planning on the County's part have been instrumental in successfully upgrading the 50-year-old community's water, sewer, roadway, and drainage systems.

Funded by a Community Development Block Grant (CDGB), Liberty Heights is the epitome of a large-scale, comprehensive, and high-profile upgrade project, featuring:

- ◆ A \$10 million budget
- ◆ A four-year timeframe
- ◆ 300 acres
- ◆ 26 streets
- ◆ 102,349 linear feet of upgrades
- ◆ Nearly 2,000 residents

In meeting the challenges of the Liberty Heights project, Gwinnett County has achieved successes and learned lessons that can be applied to similar efforts in the future.

Besides the normal obstacles presented by an undertaking of this magnitude, the Liberty Heights project posed additional challenges. The community is one of the oldest subdivisions in Gwinnett County, with many of the original plats dating back to the 1940s. At the time of Liberty Heights' construction, few infrastructure development regulations existed. By the year 2000, when project work commenced, portions of the community's water, sewer, streets, and drainage infrastructure

had deteriorated to the point where immediate improvement was essential. Additionally, most of the roads located in this neighborhood had limited right-of-ways (between 30 and 50 feet), which presented obstacles to design and construction.

Nonetheless, through careful planning and a dedication to

ensuring communication among all stakeholders, the County and its selected design team have been able to perform all tasks on schedule and budget while satisfying stakeholders and residents alike. While the Liberty Heights project encompasses hundreds of tasks and thousands of decisions within those tasks, the brunt of the lessons can be summarized into two overarching principles:

...the brunt of the lessons can be summarized into two overarching principles...

Proper Project Management & Attention to Outreach

Proper Project Management

This seems like a “no-brainer,” but it’s important to keep in mind that as a project’s size and scope expand, the experience and procedures needed to manage that project increase exponentially. It is especially important to retain a consultant with experience specific to residential areas. A project in an industrial zone or corporate campus, no matter how complex, lacks the immediacy and the potential for community backlash that “real-time” work in a thriving residential region does.

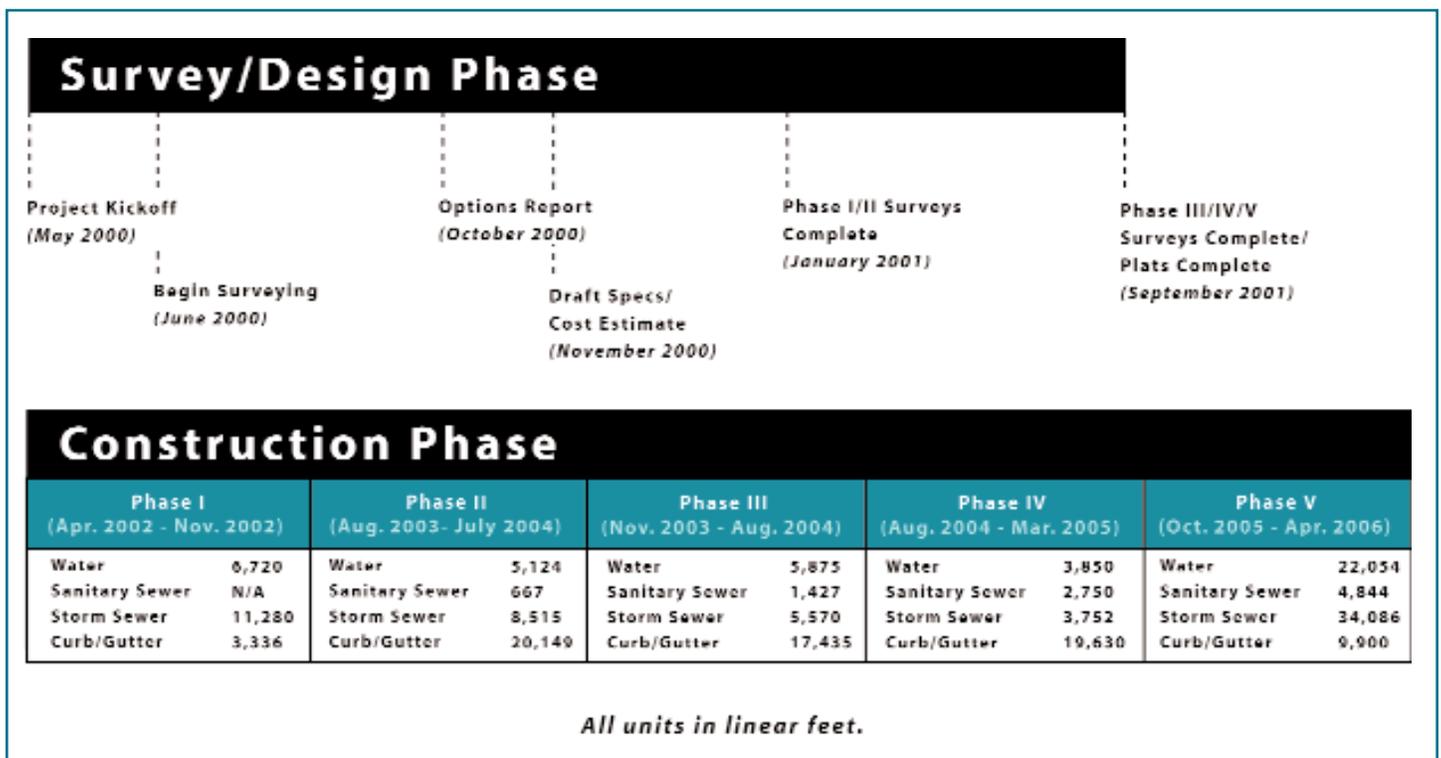
Recognizing that project success would depend heavily on coordination with residents, Gwinnett County joined with the project team in making allowances for Liberty Heights’ scope prior to project inception. As the accompanying timeline shows, the project was divided into two major stages: a design/survey stage and a construction stage.

The design/survey stage, which was performed well before construction began, included numerous public input meetings to inform stakeholders

about the nature of the work, when the work would occur, and how each section of the community would be affected. This initial interaction with Liberty Heights residents fostered cooperation and mutual respect before construction impact began.

In work sessions conducted with the county, Prime and the county developed a construction implementation plan divided into five distinct phases of approximately 180 days each. Each phase of work proceeded quickly while avoiding excessive disruption in any single area.

Dividing the project in this fashion permitted use of multiple contractors, ensuring that the enormous volume of work was broken into manageable tasks and could be completed in a timely fashion. As Gwinnett County Public Utilities Manager Brian Speer attests, “The project was so huge... 26 streets... that it would have been impossible to get the work done under one contract. Splitting the project into multiple contracts was absolutely essential to stay on schedule.”



Segmenting construction work into discrete project phases has permitted even multiple contracts involving different contractors to be managed with no confusion or overlap. Because the phases are clearly delineated and because responsibility for project communication has been preemptively assigned to a dedicated single point of contact, the County has been able to ensure that school buses, mail deliverers, emergency vehicles, and similar service providers are duly notified of ongoing and impending construction. Therefore, Liberty Heights' residents have received customary services with minimal disruption.

Finally, a critical part of the initial planning effort involved a good-faith effort on both the County's and the design team's part to respect residents' property rights. As the recent Supreme Court case of *Kelo vs. New London* shows, disputes between homeowners and municipalities can quickly escalate to a high level of volatility if care is not taken to preserve property rights. Therefore, the project team designed improvements to be within existing right-of-ways to minimize property acquisition/encroachment. Additionally, when assisting in obtaining necessary easements, the team proactively discussed easement issues with residents to obtain buy-in.

Attention to Outreach

Community outreach, perhaps overlooked amid a project's plans, specs, cost estimates, and similar logistics, is among the most important item to consider. When planning infrastructure improvements, even more important than the minutiae of streets, sewers, and curb cuts is the good will of the people who use these facilities.

When conducting initial planning for the Liberty Heights project, Gwinnett County and the project team recognized that resident "buy-in" would be essential. According to Prime Engineering Project Manager Lee Harrop, "Getting the word out to residents and giving them a single point of contact for information was 90% responsible for the success of this project."

"Getting the word out" entailed letting Liberty Heights' residents know *what* work was going to be done, *where* it would be performed, *when* it would occur, and *whom* to contact with questions. This information has been disseminated by a number of means: English- and Spanish-language newsletters, bulletins on door hangers, public-notice signs, and personal door-to-door communication. During construction, residents have been informed of schedule changes as they occurred, notified which tasks were to occur when, and generally kept "in the loop" throughout the improvement process.

The "single point of contact" during construction is Prime Engineering's Mr. Don Cavanaugh, a 30-year veteran of large-scale engineering and construction projects. Mr. Cavanaugh has become the "go-to" person for issues associated with the project.



Mr. Cavanaugh, however, has done more than simply make himself available to the community—he has proactively taken the initiative in reaching out to Liberty Heights residents, interfacing with residents, and following up with all parties to ensure issue resolution. During one especially busy project phase, Mr. Cavanaugh fielded more than 20 issues per week, personally contacting appropriate parties to ensure issue resolution.

Mr. Cavanaugh is the single point of contact not only for residents, but also for the multiple municipal departments involved in the upgrade,

including Gwinnett County's Department of Public Utilities and Department of Transportation. County personnel have learned that they could go to Mr. Cavanaugh directly when an issue arose, and Mr. Cavanaugh would see to it that the issue was resolved quickly and personally.

Mr. Speer summarizes project stakeholders' esteem for Mr. Cavanaugh's capabilities: "He's been phenomenal... visible on a daily basis. Everyone feels very comfortable talking to him, and his ability to handle issues has been invaluable. I've forbidden him to retire."

Aviation ♦ Design-Build ♦ Facilities ♦ Industrial ♦ Municipal ♦ Site Development ♦ Surveying ♦ Transportation

Prime Engineering, Inc. values our relationship with you. If you would prefer not to receive information from Prime Engineering, Inc., please reply to this email with "unsubscribe" in the subject header.

To discuss how Prime can help you with upcoming surveying, planning, design, or construction services call us at (404) 425-7100 or email us at info@prime-eng.com.

Prime Engineering, Inc.
1888 Emery Street, NE
Suite 300
Atlanta, Georgia, 30312
T: 404-425-7100
F: 404-425-7101
www.prime-eng.com