

Beating the Industry Average By 90%

How Front Line Advisory Group Redefined Program Management

Capital Improvement Bond Programs

Capital improvement bond programs play a crucial role in financing public infrastructure and development projects and addressing long-term capital needs of municipalities and other governmental entities. These projects typically include the construction, renovation, or expansion of public facilities such as schools, libraries, hospitals, roads, parks, water and sewer systems, and other essential community assets.

Capital improvement bonds can be thought of like a mortgage someone would take to build a home. The person does not have enough cash to build it, so they have to get a loan from the bank that will be paid off over a set number of years with interest. In the same way, these programs allow municipalities to raise funds by issuing bonds to investors, with the promise to repay the principal and interest over a specified period of time. These bonds are backed by the municipalities taxing power and revenue streams, which is why their approval typically requires voter approval during an election.

Program Necessity

Every new bond proposal offers voters the opportunity to contribute to the growth and prosperity of their community. It is essential for voters to appreciate the financial implications of their decisions, recognizing

that each vote carries its own potential outcomes. A vote in favor might lead to an increased tax rate or simply permits the municipality to utilize existing funds. Occasionally, bonds may include projects that some community members question, but it is crucial voters also understand the financial and community implications of an opposing vote.

Investment in capital improvement programs ensures the upkeep of crucial infrastructure, like roads, drainage, and water and sewage systems. These investments also provide much-needed facilities and services, such as schools, healthcare facilities, and public transportation systems. A healthy capital improvement program leads to flourishing economic development, effectively managed costs, minimized safety risks, and resilience against vulnerable shifting populations and natural disasters.

State of Program Management

Poor program management across the industry has led to:

- **90%** of the world's infrastructure projects are either late or over budget ([Economist, 2017](#)).
- **98%** of megaprojects become delayed or over budget ([McKinsey, 2016](#)).
- Large projects typically take **20%** longer to finish than scheduled and

up to **80%** are completed over budget ([McKinsey, 2016](#)).

- Owners experienced an average of **6 changes** to the budget and **5 changes** to the schedule, with an average increase of **15%** to the project costs as a result of these changes ([BusinessWire, 2021](#)).
- **60%** of general contractors see problems with coordination and communication between project team members and issues with the quality of contract documents as the key contributors to decreased labor productivity ([Autodesk, 2019](#)).
- Poor communication is the root cause of project failure **1/3** of the time ([PMI, 2013](#)).
- **69%** of owners say poor contractor performance is the single biggest reason for project underperformance ([KPMG, 2015](#)).
- **45%** of construction professionals report spending more time than expected on non-optimal activities ([PlanGrid, 2018](#)).
- **68%** of trades point to poor schedule management as the key contributor to decreased labor productivity ([Autodesk, 2019](#)).
- **\$1.63 trillion** could be saved annually from infrastructure productivity changes ([McKinsey, 2013](#)).

About FLAG

Front Line Advisory Group (FLAG) provides program management consulting services in Central Texas for municipal and school capital improvement bonds. FLAG is revolutionizing the construction industry and transforming client expectations by obsessing over the basics of budget oversight, schedule enforcement, compliance, vendor management, and stakeholder communication.



FLAG is a Service Disabled Veteran Owned Business that leverages their military experience and core values of discipline, focus, and service to drive their approach to program management. They believe their focused and disciplined approach targeting the five major challenges statistically proven to hinder program success is key to successful program management.

The most common issues that lead to projects failing to stay on time or on budget

are not related to engineering. This is because engineers are great at engineering. By nature of their expertise, engineers typically do not possess the specialized skill sets required for project controllership, scheduling, and managing public relations. Hence, it is worth questioning the rationale behind assigning engineering firms these responsibilities, as they are most often the underlying causes of project failures. FLAG believes in utilizing the most experienced and appropriate person to complete a task, and recommends municipalities split the management fees for their capital improvement programs into two buckets. One goes to the engineering firms as normal, but the funding for the scope of work associated with program management, such as budget oversight, schedule enforcement, and stakeholder communication, goes to a program management consulting (PMC) firm. This is like a municipality hiring an entire program management office to support its interest in all aspects of the project. With two separate contracts, conflicts of interest are removed, and the PMC is able to act on behalf of the municipality to hold vendors accountable, enforce contract compliance, and more effectively manage all stakeholder relations.

When the industry average for completing capital improvement projects on time and on budget is 10% and mega projects is 2%, FLAG's 100% success rate on their first 31 projects is unheard of. FLAG accomplished this by focusing on the fundamentals on budget management, schedule enforcement, contract compliance, vendor management, and stakeholder compliance. These projects were managed by a highly skilled and experienced team consisting of a Program

Manager, Project Controller, Program Scheduler, and Program Analyst.

Program Overview

FLAG is managing the 2017 Bond Program for Travis County, Texas. This capital improvement bond program includes 58 infrastructure and investment projects totalling \$307M. These projects are in response to the record setting growth of the community and focus on a variety of needs, such as: investing in land for future projects, small bridges, sidewalks, new and widened roads, safety improvements, sports fields, and park facilities.

Results

Within four years, FLAG has been able to complete its first 32 projects of a 58 project program on time, on budget, and to client expectation. Through these first 32 projects, they have saved their client approximately \$26.8 million of the initially estimated costs (8.9% of the total estimated budget), and they have another 26 projects in queue.

When the industry average for completing projects on time and on budget is only 10%, achieving these results for 100% of their first 32 projects begs the question, "What are they doing differently?"

Methodology & Approach

FLAG is actively engaged with the capital improvement bond program from the initial pre-bond planning phase through the warranty phase. The success of any capital improvement bond program hinges on

effective planning, while the other 20% is focused and disciplined implementation.

FLAG's support of the bond advisory committee is invaluable, because they are able to provide expert advice on key considerations, costs, and expectations. Their guidance ensures the formation of a comprehensive and adequately budgeted plan before any bond proposition reaches the ballot. Similarly, FLAG advises on the request for proposals and scrutinizes contracts for the design and construction firms. Doing this ensures specific scope and task details are included to set the foundation for an efficiently run project.

After the bond is passed, FLAG kicks off the program by setting the projects up in the project management software, Procore, to facilitate effective communication and coordination throughout the life of the project. Then FLAG conducts extensive planning with various stakeholders to establish a budget allocation phasing plan to ensure the project will have cash when needed, a master schedule to ensure everyone is aware of when each key milestone will occur, and a stakeholder communication plan that encompasses both internal and external stakeholders.

Throughout the program, FLAG makes it their purpose to provide transparency, maintain a sense of urgency, and remove roadblocks. This includes collecting monthly updated schedules, so potential issues can be identified as quickly as possible. Invoice activity is monitored, and every invoice is reviewed for accuracy and compared to the updated monthly schedule. Project documents and activity are monitored to

ensure project coordination operations run smoothly. For example, this might mean ensuring everyone is aware when a project is discussed at Commissioners Court, ensuring permits are being worked, ensuring right-of-way and utilities coordination is occurring, or generally ensuring all of the relevant stakeholders are in the know.

FLAG makes it their mission to safeguard the interest of the municipality to ensure all projects are completed on time, on budget, and to their expectation. To accomplish this mission, FLAG relies heavily on cultivating a trusting relationship with the municipality, in which the municipality has full faith in FLAG's integrity, advice, and strategy. Without their backing to uphold these practices, all commitments would merely amount to empty promises. Therefore, FLAG will continually nurture this indispensable bond with their clients to reinforce a mutual pursuit for project excellence.

Lessons Learned and Best Practices

Problem 1: *Engineering firms are great at engineering, which is why engineering is not one of the top challenges limiting project success. However, engineers are not experts in finance, compliance, communication, or scheduling, so why are they managing these parts of the programs?*

Solution 1: Separate out the program management portion of their scope of work, and allow them to solely focus on the engineering aspect of the program. Then hire a PMC for the program management scope of work. This ensures the client has the right

person assigned to the scope of work they are most qualified for without incurring any additional cost. With this arrangement, the PMC is also able to serve as the owner's representative.

Problem 2: *Capital improvement programs are viewed by phase instead of as a holistic program. This approach is due to the uniqueness of each phase, because they each require a different skill to effectively manage them. However, the interdependence each phase's success has on the effectiveness of the previous phases requires someone that can view them holistically.*

Solution 2: FLAG assembles a program management team tailored to each client and led by a single Program Manager. This method ensures there are specialized experts focused on their defined responsibilities within the program, and a consistent unifying voice from the Program Manager when working with stakeholders.

Problem 3: *Capital improvement bond programs are brought to voters without efficient pre-planning. This undermines the credibility of the proposed plans, and impacts the feasibility of the program and all future efforts. Meticulous planning and strategizing should be an integral part of the process, ensuring programs presented to voters are backed by a solid foundation of a thoughtfully crafted and realistic plan.*

Solution 3: Hire a PMC to provide realistic project cost estimates, based on actual costs of the most recent similar projects, current market conditions, and annual inflation rates based on the anticipated project start date. They should also develop a community

stakeholder engagement plan and a master schedule showing each project's anticipated duration across the major phase, how the project timelines compare to each other, and considerations for available resources.

Problem 4: *Municipalities do not have effective tools for enforcement. This often leads to project schedules feeling like a formality rather than a timeline to be held to. The lack of oversight and enforcement that results from this leads to issues being found too late in the process to be effectively handled in a timely manner.*

Solution 4: Municipalities should write language into their contracts that require the design and construction firms to submit baseline, monthly updated schedules, and recovery schedules. This requirement helps in creating a new master schedule from the baseline schedules of the design and construction firms. Then each month, the updated schedules should be submitted for approval. This process is made easier with project management software, like Procore, and project scheduling tools, like Microsoft Project and Primavera P6. If unexpected situations in the project arise, a recovery schedule should be created to identify how the time will be made up. Only as a last resort should time extensions be issued.

Problem 5: *Project schedules are not viewed as concurrent. Not having overlapping involvement of the teams executing each phase leads to challenges later in the project. For example, failing to acquire right-of-way ownership leads to project redesign, but that could have been mitigated if the right-of-way issue was known during design.*

Solution 5: FLAG ensures to involve key personnel as early as practical in the process. For example, right-of-way and utility relocation coordination will start at the 30% design phase and required acquisitions are identified at the 60% phase. At each of these major milestones permit reviewers are also involved to identify potential problem areas and mitigate redesign after the 100% design phase.

Problem 6: *Failing to effectively manage cash flow is the downfall of many businesses, and this is no different for capital improvement programs.*

Solution 6: FLAG centralize fiscal control and oversight for their programs, and develop a phasing plan to ensure cash is available only when needed. This means having a single program budget broken out by each project, monthly budget updates with the municipality, encumbering only the funds needed for that specific year, and implementing an invoice review process that compares invoices to the work completed according to the monthly schedules.

Conclusion

FLAG's ability to complete 100% of their first 32 projects on time, on budget, and to client expectation sounds like a solid first step in their attempt to revolutionize how the industry operates. Their unique approach of focusing on the fundamentals, being involved in the planning process before the bond is created, splitting out the program management from the engineering firm's scope of work, and ensuring contracts are written in a way that facilitates effective program management, is helping shape a

better future for their community, while saving their clients time, money, and stress.

The role of the PMC is of vital importance for any capital improvement bond program. These PMCs play a pivotal role in resource allocation, stakeholder communication, risk management, and acting as an intermediary between diverse entities. They ensure resources are used effectively, systematically identify potential future risks, implement effective strategies, help organizations make better informed decisions, and consistently maintain focused progress towards program goals.

Future capital improvement bond programs should be intentional in developing plans for effectively communicating their program with stakeholders and establishing a solid foundation from a program to be built upon. Municipalities should write their contracts in a manner that gives them the ability to effectively manage their program and enforce project schedules. Throughout the program it is vital to establish a master schedule and review the updated monthly schedules to stay ahead of any challenges. It is also crucial to have visibility of the entire program's budget and to have a plan to have cash when and only when it is needed. Just these basic recommendations alone prove the complexity of capital improvement bond programs. This is why FLAG recommends municipalities bring in a PMC that can provide a highly skilled, experienced, and tailored team to execute in a focused and disciplined manner and complete the projects on time, on budget, and to their expectations.

Written by Craig Starcher on June 28, 2023