5 | Project Team Overview

5.1 Client Information

The owner of the project is a Christian Educational Organization known as the Washington Christian Academy. Their intention is to build a Washington Christian Academy campus that will educate students both academically and spiritually. The original school was founded in 1960 by families from Presbyterian and Christian churches. It was founded on the principle of Reformed Tradition, which is based on welcoming a diverse student population (racially, socially, and any Christian denomination). In 1996, the school merged with Silver Spring Christian Academy and henceforth was named Washington Christian Academy. The new Flagship school will provide education for approximately 300 K-12 students and serve as a home to the WCA administration offices. The reasons for the move from WCA's current location in Silver Spring, MD to Olney, MD are outlined below in an excerpt taken from the Washington Christian Academy website.

> Building the Promise is rooted in wisdom and good sense. It has been seasoned in prayer and in wide consultation, and it makes sensible provisions for the future of Washington Christian Academy. The proposed location provides many practical advantages: a good location on a major regional road; a setting of natural beauty; room to expand. A permanent home gives our families greater security and stability than rented facilities. We are designing our campus to suit our educational goals. Academics, athletics, music, drama, and extracurricular activities will finally get the space they need.
>
> *http://www.washingtonchristian.org/page05b2.html*

The master plan will take over 10 years to build. Phase I is currently being constructed, which includes the Flagship Building, Gymnasium, a soccer/football field, baseball field, and softball field. The overall campus will accommodate 1,100 students when it is finished and will include separate elementary, middle and high schools, an athletic complex, more athletic fields, a chapel, and performing arts spaces.

<u>Construction Details & Priorities</u>

During construction, the owner is represented by an owner's representative. The school's Headmaster, Vice President, and Chief Financial Officer make most of the decisions concerning the construction of the building, but are represented by one man who attends meetings and deals directly with the construction manager. He serves as the liaison between the WCA decision makers and the field.

The owner is concerned with cost constraints on the project, but ensuring that the job is done well and that the building is of high quality is more important. Vic Bonardi, the Forrester Design-Build Manager, was quoted saying, "In the process of controlling the budget, we never wanted to cheapen any part of the facility that would have to stand the test of time". The owner put some contingency money in the project budget to allow for changes and additions, but would most like to use the money for last minute upgrades that would really make the educational facility first class. At this point, schedule constraints are of the most importance to the Washington Christian Academy. The buildings must be open and

operational for the 2008-2009 school year. As it is scheduled now, Phase I will be completed in early August which does not allow for many more changes or delays. An example of how important the schedule is to the owner is demonstrated by the fact that the owner is spending money to accelerate the project. They are willing to pay overtime in order to recover from the initial project delays.

A close second in priority to the owner is keeping the parties involved happy. Running a smooth project without complaints or high numbers of change orders is important. There is a prosperous working relationship due to the fact that everyone is actively doing the best they can to solve problems quickly and efficiently, and avoid change orders whenever possible. Keeping the neighbors happy is just as important to the Washington Christian Academy. For instance, the WCA spent a bit of extra money to excavate differently near the main road to save some trees that the neighbors wanted to be retained. A few neighbors across Georgia Avenue had concerns that they were not being properly notified of construction dates and durations. These concerns have been addressed and remedied. The WCA intends to keep a positive rapport with its future neighbors in order to gain local support and acceptance in the Olney Community.

5.2 Project Delivery System

Project Delivery Method

The conventional delivery type in Washington, DC and surrounding areas is the standard Design-Bid-Build method. This project, on the contrary, uses the less typical Design-Build approach. The usual trademark characteristics of a Design-Build project are integrated design and construction phases, early retainage of subcontractors, subcontractor input in design, fast moving projects, incomplete design documents, and most notably a single contract between the owner and construction manager. The Washington Christian Academy Flagship Building and Gymnasium only make use of the single contract characteristic of a typical Design-Build delivery. The original contract schedule does not show construction beginning until the final design was complete. This counteracts the concept of a fast-track project and overlapping design/construction phases.

So why did the WCA choose a Design-Build project delivery system, and why choose Forrester Construction Company as the company to hold the contract with? The answer is that the WCA is not an experienced owner. Typically, school boards and presidents are inexperienced in the construction process and hire a third party construction manager to oversee the construction details and logistics. The Washington Christian Academy decided to hire Forrester to assume the role of the construction manager and general contractor. It was then Forrester's job to contract with the architect, engineers, and subcontractors. While the subcontractors were not involved in the design process, Forrester Construction Company was. As a result, the construction consideration during design was still achieved, which is a large benefit of using the Design-Build method. This has the potential to result in fewer change orders and missed scope. Additionally, there is typically less risk for the owner in a Design-Build project delivery. The single prime contract protects the owner from missing scope between multiple

contracts. It is Forrester's job to ensure that the building is completed to the owner's standards and contract agreement terms.

The reason Forrester was chosen as the Design-Builder is because they are a qualified, local, reputable construction company in the metro DC area. Their Design-Build division is growing and completing many successful projects. The project was gained by a negotiated bid. Forrester Construction Company obtained the subcontractors through a competitive bid process. It is required of all subs to have General Liability, Automobile Liability, Workers Compensation, and Excess Umbrella Insurance. Any subcontractor that has a contract amount under $100,000 does not requiring bonding. A contract amount over $100,000 requires a bond for the full contract amount for performance and payment. All forms of insurance must be job specific.

Organizational Structure & Contract Types

Single Prime Contract: The single contract that the owner holds is with the Forrester Construction Company. The primary purpose of a contract is to allocate risk; and this type of system allocates a great deal of risk to Forrester. It is a safe method of contracting for the owner and can be a profitable method of contracting for the Design-Builder. Typically in a GMP contract, the owner recovers the contingency money (and in this case wants to re-invest the extra money for high end finishes or upgrades). This cost reimbursable contract type is frequently used for Design-Build projects because it typically occurs before 100% of the construction documents are complete.

Contracts with Design Companies: Forrester hired and collaborated with Grimm+Parker Architects. The contract type in this situation is a lump sum contract. It becomes the responsibility of Grimm+Parker to obtain and contract engineering consultants. This partially adds to the Design-Build characteristics of the project. The architectural design incorporates the engineers and the construction perspectives because the typical "middle man" is out of the picture.

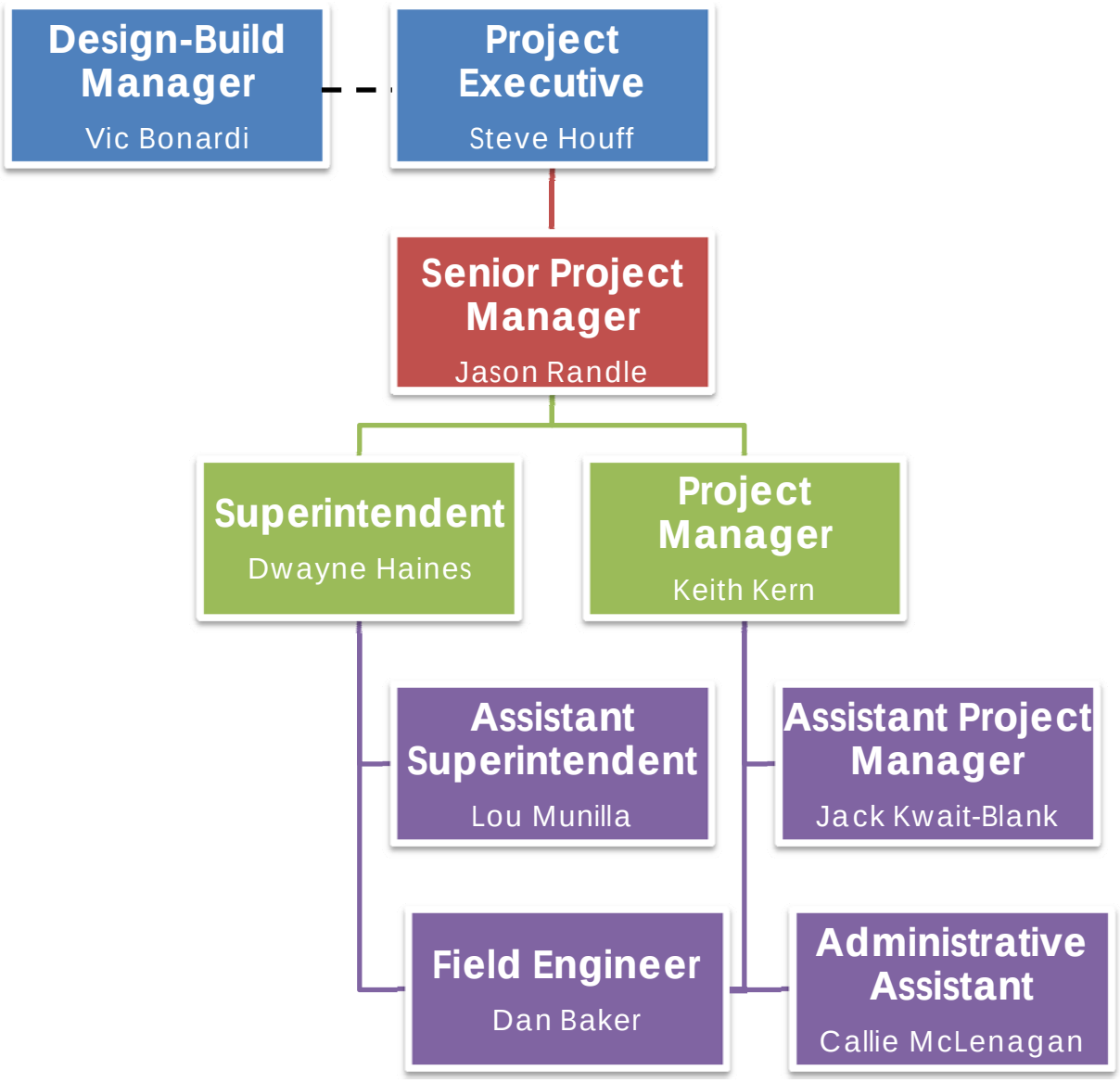
Contracts with Construction Subcontractors: Forrester holds lump sum contracts with each subcontractor on the site. Every CSI division is the responsibility of one or two subcontractors, depending on how the work scope is divided. The subcontractors are chosen based on a variety of selection criteria. This criterion includes but is not limited to previous experience on the type of project, familiarity and relationship with Forrester, current workload and capacity of the subcontractor, and verification of insurance.

These contract types seem appropriate for this type of project delivery system. A typical contract defines scope, compensation, time, schedule constraints, and legal issues. It is logical that an inexperienced owner would only hold one of these contracts with a reputable, trustworthy Design-Builder. This contract allows for the owner's contingency money to be used as they deem necessary, which in this case is for accelerating the project, change orders, and upgrades.

5.3 Project Staffing Plan

Internal Organizational Structure for Washington Christian Academy

Forrester Construction Company



Employees based from the main office in Rockville, MD.

Employees based from the main office in Rockville, MD.

Employees based from the WCA site trailer.

Employees typically based from the WCA site trailer, may travel & assist with other projects from time to time.

Figure 5.1 WCA Project Staffing Organizational Chart

The organizational chart shows the current structure of the Washington Christian Academy team. The Design-Build Manager oversees all of the Design-Build projects in the company, which is why there is a dotted line connecting him to the project. The Project Executive and Senior Project Manager also supervise multiple projects simultaneously. The Superintendent and Project Manager are the most involved upper management on a day-to-day basis. Typically, they are only assigned to one project at a time. These two men work together collectively to solve problems, manage subcontractors, and complete the project successfully. Supporting the Superintendent and Project Manager are the Assistant Superintendent, Assistant Project Manager, Field Engineer, and Administrative Assistant. These employees help to complete tasks, supervise work, and keep everything running smoothly. At Forrester Construction Company, there is a strong emphasis on team work. In fact, the above employees shown in the organizational structure would be referred to as the "WCA Team". While a certain level of hierarchy exists, the atmosphere is one of equality and respect. Each team member is acknowledged as a vital part of the project's success.