Integrated Project Delivery
For Public and Private Owners

NASFA
COAA
APPA
AGC of America
AIA
Integrated Project Delivery
For Public and Private Owners

A Joint Effort of the National Association of State Facilities Administrators (NASFA); Construction Owners Association of America (COAA); APPA: The Association of Higher Education Facilities Officers; Associated General Contractors of America (AGC); and American Institute of Architects (AIA)

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**Introduction**  
**Degrees of Collaboration: An Evolutionary Process**

In construction, there are degrees of collaboration. Owners, more than any other stakeholder, drive the degree of collaboration they receive on their projects. They influence this early in projects through their procurement and contracting process. In this manner, owners may establish the baseline for the level of integration that they may expect on each project.

Integration is often used interchangeably with “collaboration,” and both terms are broadly used. With the emergence of the term “Integrated Project Delivery” (widely known by its acronym of “IPD”) the use of the term “Integrated” has been even more broadly applied. Most owners are determining on a project-by-project basis whether there is any benefit to trying to establish a higher level of integration and what the tradeoffs might be.

“Integrated Project Delivery for Public and Private Owners” offers a tiered approach to achieving collaboration based on three levels. The three levels represent the typical spectrum through which owners move. Whether it is legislative restrictions, policy limitations or cultural barriers, there are a number of reasons that affect where on this collaboration spectrum public owners—indeed all owners—fall. The Three Collaboration Levels are:

1. Collaboration Level One – Typical; collaboration not contractually required
2. Collaboration Level Two – Enhanced; some contractual collaboration requirements
3. Collaboration Level Three – Required; collaboration required by a multi-party contract

It is acknowledged that many of the integrated principles discussed both here and elsewhere are not new and to varying degrees have long been applied: Level One (Typical Collaboration) would be the way many owners have been working for years. It is assumed that owners understand the concepts of collaboration and integration at least to the level of “typical collaboration” whether they are able to apply the concept or not.

Based on the Levels of Collaboration above, this publication further divides its examination of IPD into two areas:

1. IPD as a PHILOSOPHY (Non-multi party contracts or Levels 1 or 2 as described above)
2. IPD as a DELIVERY METHOD (Multi-party contracts or Level 3 as described above)
Within that dual framework, the Overview of IPD addresses the questions: “What is IPD?”; “Have we not already been doing IPD?”; “Should we be doing IPD?” and if yes, “Which variation of IPD should we be doing?”

This publication progresses to explore the highest form of collaboration by today’s standards: IPD as a DELIVERY METHOD. Perhaps public and private owners not currently able to use multi-party contracting will try this approach as a “pilot” or “test project,” obtaining a one-time exception or variance to do so if required.

For those owners not able to use a multi-party contract, but who wish to take collaborations to another level, the question “How much ‘IPD’ can I do without a multi-party contract?” is explored next in the IPD as a PHILOSOPHY section.

As collaborative delivery models increase in use and popularity, all owners will be increasingly tasked with evaluating how much integration or collaboration is appropriate or desired on their projects. This publication is offered to help them better understand and communicate their options and decide how best to drive their projects to the most successful outcome.
1. Integrated Project Delivery (IPD): An Overview

A. Forces Driving Change

The design and construction industry, essentially unchanged for well over a century, is looking at a future significantly different than its world today. A range of forces are at work; new tools, methodologies and roles are influencing and shaping fundamental cultural and business shifts. We stand in the early stages of an accelerating, pervasive and positive transformation.

Industry culture and methodologies evolve in response to a wide range of factors. Significant forces influencing design and construction today include the following:

- Waste and lack of productivity
- Technological evolution (software)
- Owner demand for value

Waste and Lack of Productivity

A U.S. Bureau of Labor Statistics study shows that productivity of the construction industry has decreased since 1964 while all other non-farm industries have increased by almost 200%. A 2004 study by the National Institute of Standards and Technology (NIST) shows that lack of software interoperability costs the industry almost $16 billion annually. A 2004 Construction Industry Institute / Lean Construction Institute study suggests that as much as 57% of time, effort and material investment in construction projects does not add value to the final product, as compared to a figure of only 26% in the manufacturing world. The construction industry should, therefore, be well positioned to find and eliminate waste.

Technological Evolution

Software for the design and construction industry has become able to manage an enormously wide range of complex data, and at the same time, has become simpler to use. Building Information Modeling capable packages can deliver benefits to stakeholders in every part of the construction process. Younger professionals are coming into the industry with new tech-savvy skills and are comfortable with new tools. McGraw-Hill’s 2008 SmartMarket Report on Interoperability suggests that 2008 was the “tipping point” year for Building Information Modeling (BIM)—it’s become an inevitable technology. Current industry research supports this fact.

Owner Demand for Value

Owners are becoming increasingly focused on demanding more value. They are aware of waste and productivity issues, technological advancements and are demanding change. In 2004, the Construction Users Roundtable (CURT) generated two whitepapers urging significant change throughout the construction process.
The need for consideration of new project delivery methods is driven by the reoccurrence of numerous problems related to the current delivery methods available. Many owners share the frustrations associated with the traditional methods and repetitively experience many of the same problems as other institutions and corporate construction projects. A rise in the number of projects completed utilizing alternative delivery methods demonstrates owner dissatisfaction with the traditional Design-Bid-Build process.

This point was highlighted by CURT (sponsored by Architectural Record in 2007) when they characterized the difficulties experienced on typical projects as “artifacts of a construction process fraught by lack of cooperation and poor information integration.” Typical problems cited included: errors, omissions, inefficiencies, coordination problems, cost overruns and productivity losses.

CURT went on to state “the historical reasons for this dysfunctionality are many, including multiplicity of participants with conflicting interests, incompatible cultures among team members and limited access to timely information.” Indeed, the goal of everyone in the industry should be better, faster, more capable project delivery created by fully integrated, collaborative teams.

B. Result: Integrated Project Delivery

None of the above factors are likely to go away, and most will only increase in their scope of influence. These forces are leading owners to change how project teams behave. If they want change, if they want teams to behave differently, if they want collaboration, if they want teams to be integrated…they have to find new ways to make these things happen. It is the owners that must point their teams in the direction that they want them to go.

Some owners are successfully applying a fresh alternative approach to the way they are contracting and incentivizing their project teams to collaborate. They are using a form of contract that involves more than two parties to the agreement: a “multi-party contract” that allows multiple parties to all agree to a common set of terms and expectations. At a minimum, the owner, its architect and its contractor all sign the single agreement, and in some cases, other members of the project team that are deemed to be critical to the project success are also brought into the multi-party agreement. Besides the parties all signing a single agreement, what is also unique is how risks are shared and how compensation is tied not to an individual party’s performance, but rather the team’s performance on the overall project.

Integration of project teams is proving to yield better results. Though many have been using practices that are now labeled as “integrated,” the idea of taking a fresh look at how owners contract to incentivize team behaviors to collaborate and focus on the project’s best interest has arrived. Whether with a multi-party contract or
under alternative project delivery methods, both new practices and updated approaches to old practices are emerging to help change the way owners may get more value out of their investments in capital assets.

Based on principles of trust and mutual respect, mutual benefit and reward, collaborative decision-making, early involvement of key project participants, early goal definition and intensified planning, and open communications, IPD is emerging as an effective project delivery choice for the industry. Leveraging new technologies like Building Information Modeling (BIM), organizing in new ways and implementing “best-for-project” thinking, teams are achieving significant benefits in terms of project outcomes for all involved.

The following table excerpted from Integrated Project Delivery: A Guide (2007, AIA and AIA California Council) suggests some of the ways in which IPD differs from traditional project delivery:

<table>
<thead>
<tr>
<th>Traditional Project Delivery</th>
<th>Integrated Project Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teams</strong></td>
<td>An integrated team entity composed of key project stakeholders, assembled early in the process, open, collaborative</td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td>Concurrent and multi-level; early contributions of knowledge and expertise; information openly shared; stakeholder trust and respect</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Collectively managed, appropriately shared</td>
</tr>
<tr>
<td><strong>Compensation / Reward</strong></td>
<td>Team success tied to project success; value-based</td>
</tr>
<tr>
<td><strong>Communications / Technology</strong></td>
<td>Digitally based, virtual; Building Information Modeling (3, 4 and 5 dimensional)</td>
</tr>
<tr>
<td><strong>Agreements</strong></td>
<td>Encourage, foster, promote and support multi-lateral open sharing and collaboration; risk sharing</td>
</tr>
</tbody>
</table>

As understanding about trends and issues in the design and construction industry continue to mature, project delivery discussions will continue to evolve. The important thing is that the process is already well underway: IPD is a new and significant player on the project delivery scene.

Collaboration and integration are not new. However, all owners, both public and private, are taking a more proactive approach to how they establish integrated teams and ensuring that they receive the level of collaboration they desire.
C. Levels of Collaboration and IPD: “Delivery Method” versus “Philosophy”

This publication assumes a tiered approach to IPD based on three levels of collaboration. The three levels represent a typical spectrum through which owners move.

The Three Collaboration Levels are:

**Collaboration Level 1 – Typical**: collaboration not contractually required

- **Common Contract Types**:
  - Open-book, cost-plus with a Guaranteed Maximum Price (GMP); fixed fee

- **Common Procurement Methods**:
  - Design: Qualifications Based Selection (QBS)
  - Construction: QBS or Best Value (fees)

**Collaboration Level 2 – Enhanced**: some contractual collaboration requirements (early participation of stakeholders, use of BIM and sharing of models, etc.)

- **Common Contract Types**:
  - Open-book, cost-plus with a GMP; fixed fee

- **Common Procurement Methods**:
  - Design: Qualifications Based Selection (QBS)
  - Construction: QBS or Best Value (fees)

**Collaboration Level 3 – Required**: collaboration required by a multi-party contract

- **Common Contract Type**:
  - Multi-party, Open-book, cost-plus without a GMP
  - Shared financial risk/reward tied to project outcome

- **Common Procurement Methods**:
  - Design: Qualifications Based Selection (QBS)
  - Construction: QBS or Best Value (fees)

Within this framework, one may further examine IPD both as a *philosophy* and as a *delivery method*:

<table>
<thead>
<tr>
<th>Level of Collaboration</th>
<th>Level One “Typical” Collaboration</th>
<th>Level Two “Enhanced” Collaboration</th>
<th>Level Three “Required” Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Philosophy or delivery method?</strong></td>
<td>IPD as a Philosophy</td>
<td>IPD as a Philosophy</td>
<td>IPD as a Delivery Method</td>
</tr>
<tr>
<td><strong>Also known as...</strong></td>
<td>N/A</td>
<td>IPD-ish; IPD Lite; Non Multi-party IPD; Technology Enhanced Collaboration; Hybrid IPD; Integrated Practice</td>
<td>Multi-Party Contracting; “Pure” IPD; Relational Contracting; Alliancing; Lean Project Delivery System™</td>
</tr>
<tr>
<td><strong>Delivery Approaches</strong></td>
<td>CM at-Risk or Design-Build</td>
<td>CM at-Risk or Design-Build</td>
<td>Integrated Project Delivery</td>
</tr>
</tbody>
</table>
i. IPD as a Philosophy (IPD “Lite” or “IPD-ish”/ Non Multi-party IPD)
IPD as a Philosophy occurs when integrated practices or philosophies are applied to more traditional delivery approaches such as CM at-Risk, Design-Build or Design-Bid-Build (where the owner is not party to a multi-party contract). In addition to not having a multi-party contract, IPD as a Philosophy is characterized by “traditional” transactional CM at-Risk or Design-Build contracts, some limited risk-sharing (e.g. savings splits), and some application of IPD principles. See Appendix B: Levels of Collaboration.

IPD as a Philosophy goes by many names: IPD “Lite”; “IPD-ish”; Non Multi-party IPD; Hybrid IPD; Technology Enhanced Collaboration to name a few.

By definition, based on the three Levels of Collaboration, IPD as a Philosophy (IPD “Lite” or “IPD-ish”/ Non Multi-party IPD) is Level 1 or Level 2, depending on the degree of application of IPD principles.

ii. IPD as a Delivery Method (“True” IPD / Multi-party IPD)
Integrated Project Delivery as a Delivery Method (True IPD or Multi-party contracting) is when the owner has elected to sign a multi-party contract with the prime designer, contractor and/or other key members of the project team. In addition to the multi-party contract, IPD as a Delivery Method is characterized by a contract that incentivizes collaborative behavior, team risk-sharing and other IPD principles and practices. See Appendix B: Levels of Collaboration.

IPD as a Delivery Method goes by many names as well: Multi-Party Contracting; Lean Project Delivery; “Pure” IPD; Relational Contracting; Alliencing to name a few.

By definition, based on the three Levels of Collaboration, IPD as a Delivery Method (“True” IPD/Multi-party IPD) is Level 3.

D. IPD Principles and Catalysts
Whether one is pursuing IPD as a Philosophy or IPD as a Delivery Method on any project, there is a range of fundamental principles that can inform project foundations. Any project delivery method may be improved through implementation of these principles. A primary distinction between “IPD-ish” (IPD as a Philosophy) and “true” IPD (IPD as a Delivery Method) may be that these principles are optionally employed in delivery methods other than “true” IPD, but are all intrinsic to and fully realized in IPD as a Delivery Method. It is recognized that not all project contexts will allow for all of these principles to be implemented: those that implement some but not all of the principles may be “IPD-ish” and still deliver much of the value of IPD, but cannot deliver the full range of benefits of a “true” IPD project.
These principles may be divided into two categories: contractual (those that may be written into agreements) and behavioral principles (those that are necessary for project optimization but are ultimately choice-based). There is an additional range of “catalysts” that can be greatly beneficial for optimizing project results.

Contractual Principles

Key Participants Bound Together as Equals
- Whether it is a minimum of Owner, Architect and Contractor, or a broader group including all project participants essential to project success, a contractually defined relationship as equals supports collaboration and consensus-based decisions.

Shared Financial Risk and Reward Based on Project Outcome
- Tying fiscal risk and reward to overall project outcomes rather than individual contribution encourages participants to engage in “best for project” behavior rather than best for stakeholder thinking.

Liability Waivers between Key Participants
- When project participants agree not to sue one another, they are generally motivated to seek solutions to problems rather than assigning blame.

Fiscal Transparency between Key Participants
- Requiring and maintaining an open book environment increases trust and keeps contingencies visible—and controllable.

Early Involvement of Key Participants
- Projects have become increasingly complex. Requiring all participants essential to project success to be at the table early allows greater access to pools of expertise and better understanding of probable implications of design decisions.

Intensified Design
- The cost of changes to projects increases in relation to time. Greater team investment in design efforts prior to construction allows greater opportunities for cost control as well as enhanced ability to achieve all desired project outcomes.

Jointly Developed Project Target Criteria
- Carefully defining project performance criteria with the input, support and buy-in of all key participants ensures maximum attention will be paid to the project in all dimensions deemed important.
Collaborative Decision-Making

- Requiring key project participants to work together on important decisions leverages pools of expertise and encourages joint accountability.

Behavioral Principles

Mutual Respect and Trust

- Nurturing a positive environment requires deep appreciation for the motivations of all project participants: if they do not operate in an environment of mutual respect and trust, performance erodes and participants retreat to “best for stakeholder” behaviors.

Willingness to Collaborate

- Collaboration is ultimately a behavioral choice. It is important to nurture an environment that supports and encourages participants to choose to collaborate.

Open Communication

- Collaboration requires open, honest communication: if project participants are reluctant to share ideas or opinions, opportunities for innovation and improvement may be missed.

Catalysts for IPD

Multi-Party Agreement

- A contract between all key project participants that includes all of the contractual principles outlined above as well as aspirational language about behavior can support IPD projects.

Building Information Modeling

- The tool of Building Information Modeling, especially employed in a collaborative setting, can greatly enhance collaboration, sharing of information, and streamline project design and construction.

Lean Design and Construction

- Focused on maximizing value, minimizing non-value added support, and elimination of waste, lean design and construction techniques are a natural fit for IPD projects.

Co-location of Team

- When key project participants can be co-located, opportunities for collaboration and innovation increase. Project commitments are more likely to be met when one becomes closer to one’s teammates.
E. Convergence: Related Industry Trends

Anecdotally, industry stakeholders communicate that complexity of projects is increasing, workloads are growing under shorter and shorter timeframes (productivity continues to be a major concern), risk management and liability control are increasingly expensive, and the industry exists in a litigious culture with a wide range of motivations under sometimes strong stereotypes. These factors all contribute to creation of an environment of increasing pressure. Three in particular warrant closer attention.

i. Lean Construction / Lean Project Delivery to Increase Efficiency

Lean Project Delivery

Another term often used to refer to a form of Integrated Project Delivery is Lean Project Delivery System ™ (LPDS), a term developed by the Lean Construction Institute (LCI). Many of the principles attributed to Lean Project Delivery are similar to those attributed to IPD. In fact, in this era of evolving terminology, many refer to IPD as “Lean Project Delivery” where the application of “lean thinking” and lean principles are applied throughout the project.

Followers of IPD treat lean principles along with the resulting efficiencies and elimination of waste as givens. Followers of lean treat collaboration and the use of technologies as givens. In the end, lean and IPD are both striving for the same ultimate outcome, just two different paths to get to the same place: to a project that has been optimized to maximize the value. Whether the project is optimized by applying lean principles first, then IPD principles, or by applying IPD principles, then lean, does not matter. Early adopters of both have shown that the application of both lean and IPD principles is natural and will lead to more successful outcomes.

The ideal application of lean begins during the design with the value stream and project schedule mapped by the team. Production of documents proceeds based on the commitments each party makes to the team. This process develops a sense of camaraderie amongst the team that should carry through the construction phase of the project. During construction, the project is scheduled throughout as a team from the milestones developed during the pre-construction phase. Each “pull-planning session” results in a more detailed schedule that clearly and accurately shows all of the activities that must occur prior to or concurrently with the next activity.

The key to the increased efficiency of lean is the measurement of adherence to the project schedule. Each party reports on its ability to meet the schedule commitments made the previous week. If commitments are not met, constraints are identified and removed by the team. The power of peer pressure, built on a foundation of mutual respect and understanding over the course of the project is a powerful motivating force for team members to meet
commitments. Each party is incented to be the project leader rather than the project laggard in an effort to move the project forward towards successful completion as defined by the value stream.

**ii. Building Information Modeling (BIM) as a Catalyst**

BIM is technology that supports the delivery of projects in a more collaborative and integrative way. Collaborative, integrated teams are using building information models in a collaborative, computable way to achieve better decision-making. Collaborative decision-making strategies are, of course fundamental to the IPD process. Even if, hypothetically, an IPD project may be delivered without using BIM and vice-versa, the real benefits will be seen only when BIM methodologies are applied to IPD processes.

The consistency of the “I” is the real value that BIM can provide to an IPD process: information integration, reliability and interoperability are at the heart of the tool. This can only happen when the information model is shared transparently and becomes an integral part of the decision-making process throughout the design, construction and management of the building.

BIM can be of great value for all owners, both public and private. In the public arena, most owners are also managers of their buildings, and it is here that BIM adds major value. Most have experienced the loss of major project information between the end of construction and beginning of the management phase; as a result, most owners understand how difficult it is to collect, organize, manage and store the many different types of information required for long-term facility management. BIM can help the owner in this major task: it can be seen as a repository of major sets of information or be linked to other information perhaps not stored within the model. BIM for facility management is the next big step for a real use of this new technology. At this point, little research exists documenting the benefits of BIM for facility management, but it is a natural step in the building lifecycle to capture information at the end of construction and beginning of operations.

**iii. Sustainability**

Building owners everywhere, public and private, are thinking about sustainability. Governing bodies, municipalities, and code authorities are also jumping in, establishing aggressive requirements in terms of energy reduction or sustainability rating system outcomes. Why? U.S. Energy Information Administration research and other studies show that the construction and operation of buildings are responsible for as much as 48% of total U.S. annual energy consumption and 76% of annual U.S. electrical consumption, making the built environment the single largest contributor of greenhouse gas emissions.
Recent research\(^1\) has shown that the level of integration has an impact on the level of sustainability that can be achieved on capital projects. The study, sponsored by the Charles Pankow Foundation and the Design-Build Institute of America (DBIA), was led by Dr. Keith Molenaar (University of Colorado) and Dr. Douglas Gransberg (University of Oklahoma) and examined the influence that project delivery methods and selection types had on the level of sustainability that can be achieved.

Using the metric of the percentage of projects that achieved either their original U.S. Green Building Council (USGBC) LEED Sustainability Rating System goal or higher, the results showed CM at-Risk was the most successful method at 94% (Design-Build was 82% and Low Bid was 77%) and QBS was the most successful selection type, at 95% (Best Value was 87% and Low Bid was 78%).

By optimizing the project and maximizing value, owners try to get the most out of their projects, but they must be smart about how they accomplish this. Lean, BIM, and IPD can all be utilized separately, but they are strongest when used together. IPD can be both a collaborative process and a relational contract that drives different behavior and teamwork. Lean is a mindset and a way of thinking that helps to promote behaviors that inherently help to improve project efficiency and collaboration. BIM is a tool that can be used to practice Lean and apply IPD. It is the medium through which these collaborative, efficient behaviors are best employed. Sustainability benefits from all of these factors to provide a more energy-efficient and less wasteful product.
2. In Pursuit of Integrated Project Delivery

A. Why Adopt IPD Philosophies?

Owners have been collaborating with their design and construction teams for years and receiving corresponding benefits. Level 1 Collaboration projects are typically delivered using Construction Management at-Risk (CM at-Risk, CMAR, CM@R, CM as Constructor or CMc) and Design-Build (DB) facilitated by open book, guaranteed maximum price (GMP) contracts. Many in the industry today refer to these Level 1 projects as variations of Integrated Project Delivery. In the context of this publication, these projects would be applying “IPD as a Philosophy.” However, there is a growing school of thought of the idea that even though the first level of collaboration has been working well for years, there is an even higher level of collaboration achievable without having to use a multi-party contract.

Achieving a higher level of collaboration, Collaboration Level 2, is proving to be possible by applying some of the IPD principles to the traditional Level 1 contracting approaches. Some of the potential areas that could differentiate Level 2 Collaboration from the typical Level 1 approach include:

- Design team involvement in performance incentives and risk sharing
- Construction team incentivized for productivity
- Subcontractor participation in performance incentives and risk sharing

As collaborative as Typical Collaboration has been, Collaboration Level Two (Enhanced Collaboration, also IPD as a Philosophy) has proven capable of being even more successful. Level Two teams are able to work even more collaboratively to achieve cost savings, shorter schedules, and more efficient handling of changes.

Though perhaps not to the same level as possible with the multi-party contract, Level 2 projects have shown they have the ability to encourage teams to “focus on optimizing the whole.” Participants are discouraged from focusing on optimization of only their own best interests. The result is teams that are focused on solutions, which yields higher quality, higher predictability, happier clients and users, overall better value and better projects. Teams are able to establish common goals and align themselves to achieve them. These outcomes may not get to the level that a Level 3, multi-party contract achieves, but much better than the traditional manner that the industry has been collaborating with for years.

B. Why Adopt IPD as a Delivery Method?

Level 3 Integrated Project Delivery evolved in part in response to the very issues identified with the CURT whitepapers. Many people ask “why do I need to contract to collaborate?” Traditional contracts that are transactional...
(and often adversarial) in nature are often at the heart of the dysfunctional issues and elements of the construction process. Projects consist of a complex web of technical requirements coupled with a network of interrelated commitments. How do owners align conflicting interests with seemingly incompatible cultures while fostering real time communication and eliminating waste? The answer is found by getting all of the parties on the same page.

Level 3 IPD, using a multi-party contract, where the Owner, Design Team and Constructor all sign one agreement, is one way to get everyone on the same page. The contract is relational in nature rather than transactionally driven. This is fundamentally different from traditional contracts since the multi-party contract defines behaviors, requires intense collaboration and incentivizes the parties for positive behaviors that are measured only by the ultimate success of the project. Decisions are made by consensus with the core group (Owner, Design Team and Constructor at a minimum) and must be in the best interest of the project even if the decision is not necessarily in any one party’s best interest.

Among the key differences between Level 2 and Level 3 Collaboration is that Level 3 projects elevate project relationships by making responsibilities contractual obligations. Risk is managed by the core group in the best interest of the project instead of being shifted to the party least able to manage or control it. Level 3 also lends itself to incorporating lean construction principles and BIM seamlessly to improve the overall results.

Even with all of these attributes, there are risks associated with using Level 3. It is a relatively new approach and with only a handful of projects completed, there is very little precedent to look to for guidance. The contract requires significant trust between the parties, and some participants may find it difficult to change their old ways and make decisions that are in the best interests of the project.

Most Level 3 IPD projects do not require a GMP. Some owners may not be able to give up the perceived control that a GMP offers. The decision-making process is truly collaborative and some owners may not be able to give up the command and control that they typically have using the traditional approach. In addition, the insurance industry is still coming to grips with this approach and there is virtually no legal precedent at this time, since there have been very few known disputes. Some owners may wait and see if Level 3 IPD “gets legs” and continues to produce good results before they give it a try.
There are tradeoffs using a multi-party contract or Level 3 collaboration that increase risk. IPD is not for everyone. These risks include:

- Trying something new and untested
- Risk issues are still new
- Building without a GMP
- Surrendering command and control
- May not get what we are looking for after huge investment of time
- Owner is taking some of the risks back – will benefits outweigh the risks?
- Measuring the benefit is difficult (to prove)
- What might happen if things go wrong

The results, however, have been powerful on projects that have embraced Level 3. Interests and cultures are aligned, everyone is focused on the project, intense collaboration starts early and continues throughout the project, problems are identified early and collectively resolved, waste is driven out, changes are reduced or eliminated entirely, conflict is avoided and disputes are resolved by the core group, schedules are improved and people have fun. The 2007 CURT study indentified (and many Owners, Designers and Contractors have experienced) the “broken system” of the traditional approach to construction projects; Level 3 IPD may not be the answer for every problem, but it has produced exceptional results on the projects where it has been utilized.

C. IPD as a Delivery Method

IPD (Level 3 Collaboration) is a delivery methodology that fully integrates project teams in order to take advantage of the knowledge of all team members to maximize the project outcome. Integrated Project Delivery is the highest form of collaboration because all three parties (Owner, Architect, Constructor) are aligned by a single contract.

i. Applying Principles and Practices with IPD as a Delivery Method

There are several different contract agreements for Level 3 Collaboration, ranging from ConsensusDOCS™ 300 Tri-Party Agreement for Collaborative Project Delivery, AIA C191 Standard Form Multi-Party Agreement for Integrated Project Delivery, and the AIA C195 Standard Form Single Purpose Entity Agreement for IPD, as well as customized agreements used on projects such as Washington State, Sutter Health, and Autodesk Waltham.

Whichever contract form is used, what’s important are the principles for implementing IPD, including: early involvement of all key participants to provide knowledge when it can make the greatest impact; joint project management to encourage all participants to be meaningfully engaged throughout the project; zero litigation to enable project teams to act in the best

See Appendix C for examples of contract agreements.
interest of the project; and joint risk sharing to encourage the project team to proactively accept and minimize collective risk.

It is crucial that all three parties (Owner, Architect, Constructor) not only agree on the contract, but also believe in the process. Because the contract is much different than conventional project experience, the teaming approach is also different. IPD is a fundamental cultural shift that should not be taken lightly. Project success depends upon the entire team adapting to a new way of working.

There are several different aspects of an IPD team. Establishing a structure at the start of the project and clearly documenting the approach are most important. Different team structures can be arranged to best suit the project. One example is the Autodesk AEC Headquarters structure:

- **SMT =** The Senior Management Team comprises one person representing each of the three primary parties (Owner, Architect, and Constructor), typically the Project Executive of his/her respective firms.
- **PMT =** The Project Management Team comprises one person representing each of the three parties, responsible for the shared project schedule, budget, and decision making.
- **PIT =** The Project Implementation Team is a larger group and comprises members from the three organizations plus additional design consultants and subcontractors involved on the project. The PIT members are determined by the person(s) most responsible for designing, detailing, and constructing the project.

Outlining the team structure assists the team in establishing decision-making procedures. The PMT is primarily charged with making all day-to-day decisions. However, a consensus must be reached by all three people. If a consensus is not reached, the SMT is consulted. The owner should carefully identify its PMT representative, as this individual will need to make decisions on the project. Slow response by any member of the PMT will delay the project, and potentially hinder the outcome.

The PMT is also responsible for budget management. With IPD, there is joint sharing of profits and losses through a profit/incentive pool. In order to be profitable on the job, team members must maintain the project budget. Therefore, all team members are incentivized to stay on track and validate the design, not only at the end of project phases, but throughout the process.
Level 3 Collaboration not only changes process but also team dynamics and behavior as well. Team members must believe that they are working for the project instead of their respective companies. Individuals must accept responsibility jointly, with a “we’ve got each other’s backs” mentality instead of the “cover yourself” mentality. By “owning” design intent as well as budget and schedule performance, the entire team is compelled to focus on quality instead of making changes for the individual company’s best interest.

One method of establishing this cohesiveness is co-location. Co-location during both design and construction brings together the right people at the right time, aiding in establishing team relationships. Co-location is most effective for the PIT (Project Implementation Team), as these are the ones responsible for designing, detailing, and constructing the project. It is beneficial for the Owner PIT member to take part in co-location. These activities are more productive in a collaborative environment. The PMT responsible for the shared project schedule and budget have found that weekly conference calls with both audio & visual are effective ways of working together.

Co-location involves not only the design and construction team members, but also early involvement of trade contractors and suppliers. In order to leverage the knowledge of the trade contractors, it is best for them to be part of the IPD contract. These subcontractors, like the three primary parties, should be incentivized to construct a better project. While not all subcontractors are necessary as part of the IPD agreement, it is best to determine which have a significant role, and include them in the agreement. This way both the architect and engineer can have a direct relationship with subcontractors during design and construction instead of through the contractor only.

While co-locating, team members should determine who is best suited to complete a task in order to eliminate redundant effort. For example, fire protection branch piping layout can be designed and modeled by the
subcontractor (with design engineer input) instead of the fire protection design engineer modeling and then the subcontractor. This will result in a better coordinated project as well as project savings.

ii. Early Lessons Learned – Practices to Consider

Following are lessons learned from an Integrated Project Delivery experience. While these are based on a “true IPD” contract for Level 3 Collaboration, these principles can be incorporated into other teaming arrangements.

Team behavior is crucial for a successful IPD project. Everyone must be willing to participate and operate as a unified team. Trust is essential to a strong team and should be established early on in the project by building relationships. Leadership behavior should be substituted with ownership mentality.

Clear communication is necessary. IPD fosters greater communication among all team members. As more essential team meetings and collaboration take place, there is still a need to document decisions. By establishing reporting mechanisms, you won’t hinder discussions with the traditional project chain of command.

A scoping exercise should be conducted at the beginning of the project. It is beneficial to the project for the team to confirm that the project will meet all of the expected needs. Some IPD participants believe the team should agree on a scope document and include it as part of the contract.

As project phases are evolving, find ways to leverage the traditional project phases. During pre-construction, validation of the design is no longer only at the end of every phase. Validation and optimization should be a continuous effort throughout design, in order to eliminate “Value Engineering” at the end of design. Coordination is an on-going process with all parties involved early on instead of after the construction documents are issued. Because the contractor is part of the project team at Day 1, the permitting process can begin early. Determine what is needed for permit directly with the approvals agencies. With IPD, there isn’t a true bid phase at the end of design; pricing and buy-out can be sequenced as the project proceeds.

BIM enhances IPD. A BIM Execution Plan (BEP) should be completed at the start of the project for model sharing among all team members. Model setup is determined by the needs of all parties. BIM is successful in an IPD environment if the design and construction team shares one BIM model, as separate BIMs are less efficient. The BIMs should be easily accessible in the
field office to review issues with subcontractors during site visits.

Early involvement of trade contractors and suppliers is beneficial to the project. It allows the team to design what will be built instead of designing for intent, saving time and money. The team is also working collaboratively throughout the project for a better price. As stated previously, it is best for key subcontractors to be part of the IPD contract, but some of the subcontractors not included in the IPD team do not have a strong incentive to act as team players. Determine a method to incorporate smaller subcontractors (such as glass, ceilings, security) for consistent project goals.

An Independent Judge is sometimes used in determining how well the team met the project goals. The judge, agreed on by the three primary parties, is brought in at project completion to assess design quality. This encourages all team members to strive for design quality, as individuals cannot lower design standards for the benefit of project budget and schedule. An Independent Judge can talk with people using the space to qualitatively measure how well the design achieved the users’ goals. This can also be achieved by including comparable projects in the contract.

iii. IPD Case Studies

Currently, there are relatively few IPD projects that have used multi-party contracts that have been completed. The American Institute of Architects (AIA) recently released Integrated Project Delivery: Case Studies (AIA and AIA California Council, 2010) which examined six real-world, completed projects that used IPD “in as pure a form as possible.”

For the purposes of the case studies, the AIA publication defined IPD using six (6) characteristics:

1. Early involvement of key participants
2. Shared Risk and Reward
3. Multi-party contract
4. Collaborative decision making and control
5. Liability Waivers among key participants
6. Jointly developed and validated project goals
# Case Study Projects

<table>
<thead>
<tr>
<th>IPD Characteristics</th>
<th>Autodesk AEC Solutions Division Headquarters</th>
<th>Sutter Fairfield MOB</th>
<th>Cardinal Glennon Children's Hospital Expansion</th>
<th>St. Clare Health Center</th>
<th>Enidice Health Ambulatory Care Center</th>
<th>Walter Cronkite School of Journalism, ASU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Involvement of Participants</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tr>
<tr>
<td>Share Risk and Reward</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Multi-Party Contract</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>No</td>
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<tr>
<td>Collaborative Decision Making</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tr>
<tr>
<td>Liability Waivers</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
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<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

| “Level of Collaboration”             | 3                                           | 3                   | 3                                             | 3                      | 3                                    | 2                                        |
| IPD: Philosophy (IPD-ish) or Delivery Method? | Delivery Method                             | Delivery Method     | Delivery Method                               | Delivery Method        | Delivery Method                      | IPD-ish                                  |

| Amount of Collaboration within Levels |
Also noteworthy from the AIA publication, of all of the projects that used a multi-party contract, only the Autodesk project used all six characteristics of IPD. This raises the point that within Level 3 Collaboration or IPD as a Delivery Method, there is also a spectrum. Even contracts using multi-party contracts may vary from lower to higher levels of collaboration through the use of more IPD practices. As the use of multi-party contracts expands and the field of study is broadened, future work will likely provide more insight into which IPD practices have the greatest impact on degree of collaboration achieved.

The above graphic reproduced from the AIA Case Studies summarizes the report. (Note: The grey areas in the graphic have been expanded for this document to show how the projects studied align with the “levels of collaboration” and the IPD definitions used in this paper.)

A key to point out is that the AIA Case Studies did not formally recognize IPD as a Delivery Method versus IPD as a Philosophy. The analysis did include one project that did not use a multi-party contract: the Walter Cronkite School of Journalism. Therefore, all but this project, using this paper’s definition, were Level 3 Collaboration and IPD as a Delivery Method. The Walter Cronkite project, which still did use highly collaborative IPD principles, was IPD-ish and Level 2 Collaboration.

In addition to the six characteristics, the following additional characteristics were identified as “highly desirable for IPD” for the purposes of the case studies document:

- Mutual Respect and Trust Among Participants
- Collaborative Innovation
- Intensified Early Planning
- Open Communication within the Project Team
- Building Information Modeling (BIM) Used by Multiple Parties
- Lean Principles of Design, Construction and Operations
- Co-Location of Teams (“Big Rooms”)
- Transparent Financials (Open Books)

All of these additional characteristics are not unique to multi-party IPD projects. In fact all of these are available to some degree with traditional
contracts and can even be applied to Level 1-Traditional Collaboration. However, these characteristics are good examples of IPD principles and when most of them are applied to a project this would be typical of the difference between Level 1 and Level 2 Collaboration.

Other observations from the AIA publication include:

- Aligning of Goals: Teams felt that “IPD’s promise is its ability to manage and mitigate risk for all three principal parties…by aligning the goals of these parties around what is best for the project and making each party responsible for the behavior of the others, all three parties gain more control of the overall process. Increased certainty means lowered risk.”

- Ability to Address Issues: Teams believed that under the relational contracts they were able to address issues and accomplish things that they could not have been able to address with traditional transactional contracts.

- Results Speak for Themselves: Anecdotally, most participants articulated that these projects were the “best project” of their careers.

D. IPD as a Philosophy - What can you do if you can’t do multi-party?

IPD as a Philosophy, sometimes called “IPD Lite,” “IPD-ish” or Level 2 Collaboration here, reflects owners’ interests in enhancing collaboration and the benefits to be gained from collaboration without establishing a multi-party contract between the owner, designer and contractor. The variations of implementation of IPD as a Philosophy (or IPD Lite or Level 2 Collaboration) by owners cover a broad spectrum, depending on the perspective, goals and requirements of owners. A good example of Level 2 Collaboration can be seen in the Walter Cronkite project from the AIA Cast Studies discussed on page 17.

Applying Principles and Practices with IPD as Philosophy (IPD “Lite” or Level 2 Collaboration)

Many owners, especially public owners, do not have the authority to enter into multi-party agreements, to agree to not litigate on projects, to accept insurance policies with provisions that do not meet current statutory requirements, and to bring subcontractors into the design process. However, to take advantage of some of the key benefits of IPD-type delivery, many contract provisions and project procedures can be modified and additional benefits delivered. These include using BIM, bringing the Construction Manager (CM) into the project early in the study process, co-locating team staff, and establishing a team decision-making process and structure, with special attention given to ensuring that issues are resolved in a timely manner at an appropriate level.
Owners that seek to enhance collaboration on projects but do not have the authority or desire to pursue a true IPD project with a multi-party contract can still benefit from many of the features of collaborative models explored in this paper. Here is a range of considerations:

**Delivery Method**

Level 2 Collaboration can be accomplished by adding IPD principals to more typical CM at-Risk projects; however several of the principles described above can be included in Design-Build contracts, as well. There are many ways to incorporate a higher level of collaboration into your project without having to use a multi-party contract. Below are some of the key elements of Level 2 Collaboration:

- Co-location of team members
- Design team involvement in performance incentives and risk sharing
- Construction team incentivized for productivity
- Subcontractor participation in performance incentives and risk sharing

**Team Selection**

Where possible, selection criteria for project designers and contractors should include experience and success with IPD/Collaborative projects or long-term experience working collaboratively with CMs selected early in the design phase. (Note: owners will need to carefully define “working collaboratively.”)

**Performance-Based Incentives**

Level 2 Collaboration involves a more significant commitment to providing pain/gain cost sharing for all parties. Many owners have implemented some type of bonus program for CMs as part of a traditional CM at-Risk process (“Level 1”); however, bringing designers into the equation involves additional creative approaches. In Level 2 Collaboration, this could be done even if the parties execute separate contracts with the owner, such as through the establishment of incentive pools.

**Owner’s Role**

Owners need to remain involved throughout the process, working as a team member, not an adversary. In most cases, owners will need to lead the process and guide the team in the collaborative direction. Owners need to recognize that successful collaborative processes require more staff time than traditional Design-Bid-Build processes. Staff needs to be empowered to make decisions at meetings where all team members are present. Furthermore, owners that are working with clients on a project need to ensure that the client is equally committed to collaborating with the project team.

Be aware of and develop an approach that is compatible with the owner’s culture. Support and commitment of the owner – from top to bottom – are

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See AIA National/AIA California Council paper, Integrated Project Delivery: A Guide (2007) which, in Part 7, describes how different project delivery methods are more or less suited for IPD.

essential to the success of a Level 2 collaborative project. Identify the appropriate individuals in the organization to implement a Level 2 collaborative process and be willing to replace staff who do not embrace this type of project approach.

Owners need to be aware of the chemistry of all the key team members, and recommend if changes are needed on any one of the constituent members’ staff to ensure that the goals for collaboration are met. It is the owner’s responsibility to create a sense of shared, common ownership of a project.

Decision-Making
Identify the most important issues and commit to solving them. Rely on the expertise of the most knowledgeable party for a particular issue. Complex projects benefit from common ownership of decisions.

BIM
BIM is a tool that is a powerful incentive to use a more collaborative process. Require all parties to use BIM and to share the information electronically with the owner. BIM greatly facilitates the process by clarifying intent and recording and sharing accurate, better coordinated information about a project.

Since Level 3 Collaboration may not be a possibility for some owners, it is important to consider the above principles when the goal is to have a project that benefits from the collaboration that IPD brings. Though collaboration may not be contractually bound, IPD as a Philosophy can offer many advantages that IPD as a Delivery Method brings.
3. Trying Integrated Project Delivery: First Steps

When an owner believes using Integrated Project Delivery is an approach to consider, where do they start? Do they have internal buy-in? Are they able to procure using a process that best facilitates collaboration? Are there other regulatory hurdles necessary to overcome? If the organization is at least at Level 1, using traditional collaboration approaches with CM at-Risk or Design-Build, the chances of increasing collaboration to Level 2 using IPD as a Philosophy are probably very high. Going from Collaboration Level 1 to Level 3, IPD as a Delivery Method using a multi-party contract, is probably more challenging, but less challenging than if the organization is not even at Level 1 yet.

The following offers a few suggestions that should help owners move their organizations in the direction of early implementation of IPD, regardless of which level of collaboration they are striving for:

A. Culture – Willingness to Change; Take Risks and Trust

The Culture of Trust
A truly integrated project is incredibly different from all other delivery systems. The required commitment by all of the parties to see the project succeed and the contractual relations that tie the parties together necessitate a team culture based on risk-sharing and trust like no other.

Willingness to Change
Change is most often motivated by dissatisfaction with the status quo. Have projects that have been delivered to date not met expectations? Has the inherent conflict built into traditional delivery methods left an owner frustrated, and paying the bill? The first IPD project at Sutter Health was motivated by the realization that escalating costs, missed completion dates, and projects wrought with claims were not meeting the owner’s needs. With similar motivation, change can occur.

Change is Coming
While studies show that alternative delivery systems routinely result in safer, faster, lower cost and higher quality projects, the vast majority of projects are still delivered in the traditional Design-Bid-Build lump sum manner with the designers and the builders operating in separate silos and often pitted against each other. Why? Political expediency! Most buyers of construction services know that the easiest way to differentiate proposals is via cost. So many other measurements are subjective in nature that it takes a significant amount of expertise to decipher the varied responses that can come from a request for proposal (RFP). When justifying a decision to go with Contractor X, a facility manager can usually feel secure in going with the low bid. With such an
emphasis on costs, the Design-Bid-Build lump sum delivery offers a known first cost on a project. Any other delivery method means that the cost might not be known until sometime later in the project; in such cases owners must trust the builder and the architect to treat them fairly.

Get Your Own House in Order
Once an owner decides that change needs to occur and IPD is the desired direction, the first challenge faced is likely an internal one, and the bigger the organization, the bigger the challenge. Selling the concept of IPD to legal staff, purchasing departments, facility managers, let alone a direct supervisor may be a huge challenge. The range of experience buying construction varies considerably from one purchasing department to another. Facility managers may like the current process and some internal owner departments may find a false sense of comfort in the “risk” that has been contracted away. The key in almost all cases is to engage the various parties in the organization and understand their concerns and involve them in the discussion to use collaboration to improve the delivery of capital projects.

The number of IPD successes that have occurred in the marketplace will have to be explained as well as the true realities of the status quo. Only after one’s own house is in order should one begin the process of looking at outside partners.

Big First Step
The next really big step—the contract—if not managed well, can easily turn an IPD project into a snowball rolling out of control. The multi-party contract dramatically changes the whole concept of control and teamwork. The owner is now a key part of the core team, involved in the decision-making process developed by the team. The builder is now a partner during the design phase and must now recognize sub-tier contractors as equal partners. Both the designer and the sub-tier contractors are now in very different positions. Each party has different risks that need to be addressed. Finding a contract that will satisfy all of the parties 100% is next to impossible. To have a successful IPD project, the parties must develop a level of trust among each other so they know that they will not be taken advantage of during the project even though all of their concerns might not be met in the contract. This is easier said than done.

The key to smoothing the downhill slope with the multi-party agreement is goal alignment. There are many measures of success on a project: satisfied clients, a stellar safety record, on-time delivery, reduced cost, no claims, and public recognition are just a few. However, almost all of the entities involved in the project will have some sort of monetary goal buried in their hopes for the project. The owner typically has a pro-forma budget for their project. Designers are typically compensated on an hourly basis. Builders are looking
to beat their estimates. While they do not have to be, most of the time in Design-Bid-Build lump sum delivery, these goals are mutually exclusive. The most successfully integrated projects are able to align the risks while encouraging behaviors that will result in achieving project goals. As discussed in the lean section, decisions must be made for the good of the project and not for the good of the individual. It takes leadership by the owner to implement this project culture and trust among all of the parties that their decision to bend on a point will not break them later in the project and start the snowball rolling again.

All contracts are based on the covenant of trust. In an IPD project, the element of trust is taken to a higher level. Owners must trust that: 1) They have the support of those to whom they are accountable; 2) They have the ability to select a team that will treat them fairly; and 3) They can align the goals appropriately to ensure project success. This can be radically different from other projects, but through embracing change, it can also be very rewarding.

B. Addressing Potential Barriers or Limitations

Most owners who are trying to move from an environment using little or no collaboration will run into issues that will prevent or limit their ability to evolve to higher levels of collaboration. Every owner’s situation will be unique; however, there are a few typical barriers that have been addressed enough times by owners in the past that there are some lessons that can be shared:

i. Selection / Procurement Options: Buying Value

Experience thus far has shown most owners choosing to use IPD as a delivery method are typically using Qualifications Based Selection processes for the procurement of their partners. This includes the design team and the construction team.

The typical selection processes used in construction include the following four types and their application to IPD is shown in parentheses:

- Qualifications Based Selection – QBS (Most conducive to collaboration)
- Best Value–Fee Proposal (Helpful for collaboration)
- Best Value–Competitive Sealed Proposal (Not collaborative)
- Low Bid (Not collaborative)

The first two, QBS and Best Value–Fee Proposal favor the ability to select the team early and support the ability to fast-track the design and construction schedule when necessary. Also, given the high degree of collaboration that is not only desired but is contractually required on true IPD, most owners elect to use Qualifications Based Selection for multi-party contracts. Best Value–
Competitive Sealed Proposals and Low Bids generally require a significant percentage of the design to be complete to use as the basis of the pricing portion of these selection types. This significantly inhibits the ability to bring teams together early to collaborate as well as the ability to fast-track the design and construction.

Those who are “required to have price be part of their selection process” would typically select “Best Value–Fee Proposal.” Caution is offered here to not weigh the fees any more than necessary to avoid providing the wrong incentive to the proposers on the project. The focus should be on finding the team that through their involvement can add the greatest value by being on board as part of the team, not the team that can offer their services at the lowest price.

ii. Regulatory / Legislative
How Some are Working Around Current Procurement Rules?
Public owners are often unable to share in the risk or the reward outside of the ways in which this is done under traditional collaborations today. Some owners are able to identify one project as an exception or a prototype and get special permission to try some level of IPD on that one project. This is recommended as a more expeditious way to try IPD than trying to change the applicable rules, regulations, or legislation that might apply to all projects.
4. Summary | Recommendations for all Owners (Not Just Public)

Integrated Project Delivery (IPD) and collaboration are being used almost synonymously. Is every owner organization, whether public or private, going to evolve to IPD as a delivery method using contractual collaboration? Probably not, but for those interested in trying to achieve the benefits of greater collaboration or improving upon their current level of collaboration, sorting through this maze can be confusing. The landscape is still changing and likely will continue to change for some time to come. This publication is a snapshot of where the industry is today.

Using the differentiator of the multi-party contract to separate IPD into two types (1. a philosophy and 2. a delivery method) and then further examining IPD based on the three levels of collaboration (1. typical collaboration; 2. enhanced collaboration; and 3. required collaboration), owners can have a clearer vision of what options may be available, and have the ability to make a more informed decision of which options to pursue.

There are several recommendations that apply to all owners, public and private alike. These include:

- Keep striving to increase collaboration
- Consider testing new concepts on pilot projects
- Learn from the experiences of others

Will Integrated Project Delivery (IPD) be a lasting trend or just a passing fad? The term may fade away and be replaced by the newest way to describe collaboration, but a recognition that the power of people working together with a shared vision and common goals will always be much greater than any individual working alone will last forever. Equip these teams with technology to improve their efficiency, remove the shackles of institutionalized transactional contracts that create the wrong behaviors, and replace them with relational contracts that incentivize behaviors that benefit the goals of the team and the ability of these groups will likely go far beyond what can even be imagined today.

Of course, all of this is simply theory without the ability to find partners in the process. How does one go about looking for willing participants? Finding them is not so different than searching for people interested in other new ventures. One must first identify what stakeholders are needed to fulfill the various roles (designers and contractors to start with) and demonstrate a willingness to venture into the unknown. If the topic has been properly researched and a reasonable plan of action has been developed, one will find that there are many who are willing to step out to try new methods. When one
considers that this presents an entirely new opportunity for businesses to gain commissions for new work, the task is an easy one.

Owners make many decisions that ultimately determine the potential for success on their projects. Among them are choosing which process to use, which team members to work with and which contracts are going to be used. Each of these decision points has implications about their migration toward improved collaboration, and ultimately into the IPD arena.
Appendix A: “IPD-ish” at Massachusetts and Emory

Example of IPD “Lite”: Commonwealth of Massachusetts

The Division of Capital Asset Management (DCAM) of the Commonwealth of Massachusetts is responsible for managing study, design and construction projects for Executive Branch agencies, including higher education, as well as for the Judiciary. DCAM administers over $300 million of construction work annually.

Since 2004, DCAM has had the authority to utilize Construction Management at-Risk (CM at-Risk) for projects with an estimated construction cost over $5 million. CM at-Risk is DCAM’s preferred project delivery method. Key provisions that differentiate DCAM’s CM at-Risk process from that which may be used by other owners, and which affect the extent to which we can implement an IPD-type project, include:

- Early subcontractor involvement: Massachusetts law restricts our ability to bring subcontractors on-board early. The CM solicits bids from prequalified firms in 17 trades categories, and the prequalified firms are selected based on lowest eligible and responsible bid. Thus, the design needs to be well-developed before the subcontractors can bid/participate in the project.

- Ability to use a multi-party contract: Massachusetts can’t bring on all parties at one time, thereby eliminating the ability to execute a multi-party contract. DCAM’s Designer Selection Board selects the Designer, who is required to execute a state Designer contract. Massachusetts’ CM at-Risk legislation articulates several of the contract provisions that must be included in the CM contract.

- CM at-Risk contractor selection is not a purely Qualifications Based Selection. As described in Massachusetts’ CM at-Risk statute (Massachusetts General Law Chapter 149a), DCAM utilizes a two-step RFQ/RFP process, whereby after the awarding authority evaluates firms’ qualifications in the RFQ. Cost is a factor in the ultimate selection, but it is not the determinative factor.

- Massachusetts has not established a pool for sharing risks/rewards. DCAM is exploring whether CM bonus provisions and our ability to offer Designer bonuses can be arranged to serve this purpose.

How Massachusetts Incorporates Key IPD Elements in its CM At-Risk Process?

DCAM recognizes the value and benefits of working collaboratively with its project partners – client agencies, designers and contractors, as well as the subcontractors involved with the projects. To that end, DCAM has incorporated a number of processes into its CM at-Risk projects that reflect IPD principles. For example, Massachusetts:
Instructs DCAM staff to take a collaborative approach to working with project team.

Has the right to approve the CM project manager and other key designer and contractor staff.

Uses BIM to varying degrees, depending on the project.

Develops work plans and decision-making structure early in the project.

Does not limit the number of meetings.

Holds meetings face-to-face.

Ensures that project staffers are on-site regularly during construction (more than on a conventional project).

Periodically supplements the architect’s fee to enable the architect to be on-site to help expedite RFIs and to answer questions. This supplemental fee allows the on-site architect to serve as a liaison between the CM and the architect’s project personnel at the main office.

Massachusetts has added some general language to its standard Designer contract that expresses DCAM’s intention to pursue a modified form of IPD:

**Attachment to Designers Contract:** Collaboration and Integrated Design. DCAM’s use of a modified form of “Integrated Project Delivery” (IPD) intended to be used as a collaboration tool to achieve project goals. Designer’s services related to the IPD process and goals shall be included in BASIC SERVICES and the BASE FEE. More specifically, such BASIC SERVICES shall include, but not be limited to the Designer’s participation on a “Core Team” established for the Project consisting of representatives from DCAM, DCAM’s Client agency, the CM and the Designer, with each member bringing differing expertise and perspective to the Project regarding the design, program, cost and schedule. The IPD process shall require the Core Team to engage in extensive collaboration and perpetuate the continuous flow of information via protocols established by the Core Team so that the full weight of the entire Core Team’s expertise will be integrated throughout the design process and the goals of the Project are attained. Core Team meetings shall be held every two (2) weeks during the entire design process to expedite decision making and collaboration.

**What Can Massachusetts Do Under Current Laws to Enhance IPD Principles and Practices in its Projects?**

There are other IPD principles that Massachusetts has NOT yet incorporated into its projects, but which it is looking to do in the future. These include:

- Enhancing/expanding our use of BIM.
- Basing selection of a Study Consultant/Designer contingent upon its experience with IPD and its willingness to work with DCAM and its CM in an IPD-like process.
- Providing bonuses for exceeding project requirements.
- Detailing the conditions for awarding bonuses.
- Identifying desired IPD-type services to be provided by Designers and CMs, and structuring contracts to reimburse the team for such extra costs.
- Co-locating project staff during design and construction – if there is sufficient staff to cover all our projects.

Massachusetts’ Division of Capital Asset Management identified a demonstration project which is incorporating the following IPD features:

- Early involvement of participants. The architect and CM were selected through separate processes, but close succession.
- Multi-party contract. Due to statutory constraints, Massachusetts cannot use a tri-party contract; however, the Commonwealth will be using a tri-party agreement (Project Management Plan) which will be collaboratively developed as soon as the CM is selected.
- Collaborative decision-making.
- Jointly developed goals as part of the Project Management Plan.
- Lean principles and techniques will be used to facilitate and accelerate the schedule by focusing on cost, program and quality as high visibility, high priority objectives.

The project is the Western Massachusetts female Correctional Facility in Chicopee. It is a relatively small job, which will allow Massachusetts to focus and concentrate on the process (IPD) and its tools (BIM, Lean).

**Example of IPD “Lite”: Emory University**

As a private institution, Emory enjoys a higher degree of flexibility in the way it approaches capital projects than many public universities. Consequently, there are a variety of delivery approaches that have been employed over time to meet the specific needs of project goals, including Design-Bid-Build, Negotiated, Design-Build and CM at-Risk. Over the years the CM at-Risk process gained favor as the predominant method of choice by Emory’s project management staff. Among the many reasons that this approach was favored included the ability to assemble a team that exhibited the traits needed to deliver a successful project, yet this occurred many times almost by accident and was impossible to predict. We were searching for an approach that could produce a more predictable outcome for success.

The introduction of IPD seemed to offer an opportunity to build upon the positive attributes of the delivery methods that were already utilized while providing an opportunity to discard the elements that didn’t necessarily add value to the process. Although IPD in its purest form might provide the optimal approach to improving opportunities for success in project delivery,
like many other institutions, we were not yet prepared to deal with everything that IPD implies, particularly the concept of multi-party agreements. There remain impediments to the idea of multi-party agreements that will take time to overcome, so we have concentrated our efforts on the elements of IPD that can be embraced with limited involvement from those outside the Planning, Design & Construction office.

Using the framework from the IPD model combined with some of the strategies and best practices of successful projects can produce an improved project delivery approach with or without requiring the use of multi-party agreements. The framework Emory has utilized when deploying the IPD approach focuses on these elements:

- Develop specific project goals and measurable benchmarks that would define success.
- Issue an RFP to qualified design teams and CM’s that clearly articulates the project description, scope, budget, schedule and intended goals.
- Require potential contractors and design firms to form their own teams and make a team selection based on interviews that examine the full team’s commitments to achieving the pre-established project goals. Asking the teams to select each other prevents the owner from “forcing marriages” and allows contractors to have a say in the design team selection while confirming the entire team’s commitment to the process.
- Establish a target savings goal utilizing the project goals as a guideline.
- Develop a “shared savings” pool to be shared among all project participants when they successfully meet target benchmarks. One model would have the owner retaining the initial 50% of all savings and the team splitting the balance, but any agreed upon deviation from this formula would work just as well.
- Challenge the team to utilize recognized “lean construction” principles to improve team performance and project deliverables and include measurable goals to validate successes.
- Establish a firm, but achievable project budget and schedule.

One of the fundamental differences with this modified version of IPD and the more traditional CM at-Risk or Design-Build delivery approach is the potential elimination of the GMP. This is a radical departure from today’s delivery methods and would, on the surface, appear to shift all of the financial risk to the owner. In fact, some people perceive that some contractors minimize their risk by inflating their GMP estimates during design. This is often followed by agonizing value engineering (VE) sessions in an attempt to maintain the project budget. We are typically not in a position to dispute their estimates without delaying the progress of the work due to the amount of time and effort required to validate and/or challenge their numbers. This is less of a
problem for the Design-Build process since the GMP is established with the original submittal.

The elimination of the GMP removes the incentive to inflate the GMP for risk protection and relies on the owner’s ability to prepare a realistic budget at the inception of a project (a necessary and fundamental project requirement anyway). One could argue that this “shifts” the risk from the CM to the owner, but an equally compelling argument states that the owner owns the risk regardless of how the budget is ultimately developed and agreed to. The contract basis can still utilize current CM contract language, but would eliminate the use of a GMP and rely on an agreed upon a “target budget” for cost targets and sharing incentives. Utilizing Design-Build contracts for IPD is more problematic. The fundamental language supporting the D-B approach simply does not apply to many of the processes embraced by IPD.
## Appendix B: Levels of Collaboration

<table>
<thead>
<tr>
<th>Level of Collaboration</th>
<th>Level One “Typical” Collaboration</th>
<th>Level Two “Enhanced” Collaboration</th>
<th>Level Three “Required” Collaboration</th>
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<tbody>
<tr>
<td>Philosophy or delivery method?</td>
<td>IPD as a Philosophy</td>
<td>IPD as a Philosophy</td>
<td>IPD as a Delivery Method</td>
</tr>
<tr>
<td>Also known as…</td>
<td>N/A</td>
<td>IPD-ish; IPD Lite; Non Multi-party IPD; Technology Enhanced Collaboration; Hybrid IPD; Integrated Practice</td>
<td>Multi-Party Contracting; “Pure” IPD; Relational Contracting; Alliancing; Lean Project Delivery System™</td>
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<tr>
<td>Delivery Approaches</td>
<td>CM at-Risk or Design-Build</td>
<td>CM at-Risk or Design-Build</td>
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<tr>
<td>Typical Selection Process</td>
<td>Qualifications Based Selection of all team members or Best Value Proposal</td>
<td>Qualifications Based Selection of all team members</td>
<td>Qualifications Based Selection of all team members</td>
</tr>
<tr>
<td>Nature of Agreement</td>
<td>Transactional</td>
<td>Transactional</td>
<td>Relational</td>
</tr>
</tbody>
</table>
| Key Characteristics | • No contract language requiring collaboration  
• Limited team risk sharing  
• CM or DB share in savings | • Contract language requiring collaboration  
• Some team risk sharing  
• Co-location of team | • Owner-Designer-Contractor (and possibly other key team members-IPD Subs) all sign one contract that contracts collaboration  
• Team risk-sharing-incl. A/E  
• Team decision-making  
• Optimizing the Whole  
• Pain / Gain sharing  
• Limits on litigation  
• Co-location of the team |
| Typical Basis of Reimbursement | GMP | GMP | GMP or No GMP (some costs guaranteed) |
Appendix C: Standard Form Agreements

A. IPD Multi-party Contracts (Delivery Method) – Level 3 Collaboration

ConsensusDOCS
ConsensusDOCS 300: Tri-Party Collaborative Agreement
The Owner, Designer and Constructor all sign the same agreement, binding them to collaborate in the planning, design, development, and construction of the project. This agreement incorporates lean principles in order to drive out waste. A core team at both the project management and project development levels is created to make consensus-based project decisions (including project incentives and risk-sharing) to increase project efficiency and results.

American Institute of Architects
AIA C191–2009, Standard Form Multi-Party Agreement for Integrated Project Delivery
AIA Document C191–2009 is a standard form multi-party agreement through which the owner, architect, contractor, and perhaps other key project participants execute a single agreement for the design, construction and commissioning of a Project. C191–2009 provides the framework for a collaborative environment in which the parties operate in furtherance of cost and performance goals that the parties jointly establish. The non-owner parties are compensated on a cost-of-the-work basis. The compensation model is also goal-oriented, and provides incentives for collaboration in design and construction of the project. Primary management of the project is the responsibility of the Project Management Team, comprised of one representative from each of the parties. The Project Executive Team, also comprised of one representative from each of the parties, provides a second level of project oversight and issue resolution. The conflict resolution process is intended to foster quick and effective resolution of problems as they arise. This collaborative process has the potential to result in a high quality project for the owner, and substantial monetary and intangible rewards for the other parties.
B. IPD Non Multi-Party Contracts (Philosophy) – Level 2 Collaboration

American Institute of Architects

AIA A195–2008, Standard Form of Agreement Between Owner and Contractor for Integrated Project Delivery

A195–2008 is a standard form of agreement between owner and contractor for a project that utilizes integrated project delivery (IPD). A195–2008 primarily provides only the business terms and conditions unique to the agreement between the owner and contractor, such as compensation details and licensing of instruments of service. A195–2008 does not include the specific scope of the contractor’s work; rather, it incorporates by reference AIA Document A295–2008, General Conditions of the Contract for Integrated Project Delivery, which sets forth the contractor’s duties and obligations for each of the six phases of the project, along with the duties and obligations of the owner and architect. Under A195–2008 the contractor provides a guaranteed maximum price. For that purpose, the agreement includes a guaranteed maximum price amendment at Exhibit A.

AIA A295–2008, General Conditions of the Contract for Integrated Project Delivery

A195–2008, provides the terms and conditions for AIA Documents B195–2008, Standard Form of Agreement Between Owner and Architect for Integrated Project Delivery, and A195–2008 Standard Form of Agreement Between Owner and Contractor for Integrated Project Delivery, both of which incorporate A295–2008 by reference. Those agreements provide primarily only business terms and rely upon A295–2008 for the architect’s services, the contractor’s pre-construction services, and the conditions of construction. A295–2008 not only establishes the duties of the owner, architect and contractor, but also sets forth in detail how they will work together through each phase of the project: conceptualization, criteria design, detailed design, implementation documents, construction, and closeout. A295–2008 requires that the parties utilize building information modeling.


B195–2008 is a standard form of agreement between owner and architect for a project that utilizes integrated project delivery (IPD). B195–2008 primarily provides only the business terms unique to the agreement between the owner and architect, such as compensation details and licensing of instruments of service. B195–2008 does not include the specific scope of the architect’s services; rather, it incorporates by reference AIA Document A295–2008, General Conditions of the Contract for Integrated Project Delivery, which sets forth the architect’s duties and scope of services for each of the six phases of the project, along with the duties and obligations of the owner and contractor.
C. Modified CM at-Risk Agreements and/or Design-Build – Level 1 Collaboration

CM at-Risk

ConsensusDOCS

ConsensusDOCS 500: Agreement and General Conditions Between Owner and Construction Manager (Guaranteed Maximum Price (GMP) with Option for Preconstruction Services)

An integrated agreement and general conditions document, the ConsensusDOCS 500 also provides an option for preconstruction services, such as providing estimates of the Project, reviewing drawings and specifications for constructability problems, creating schedules for procurement of long lead items, and developing Trade Contractor interest in the Project. It may be used in a variety of negotiated contract situations in which the Owner desires a comprehensive set of preconstruction and/or construction services from the Construction Manager and seeks the assurance of an overall project cost ceiling.

American Institute of Architects

AIA A133™–2009 (formerly A121™CMc–2003), Standard Form of Agreement Between Owner and Construction Manager as Constructor where the basis of payment is the Cost of the Work Plus a Fee with a Guaranteed Maximum Price

AIA Document A133–2009 is intended for use on projects where a construction manager, in addition to serving as adviser to the owner, assumes financial responsibility for construction of the project. The construction manager provides the owner with a guaranteed maximum price proposal, which the owner may accept, reject, or negotiate. Upon the owner’s acceptance of the proposal by execution of an amendment, the construction manager becomes contractually bound to provide labor and materials for the project and to complete construction at or below the guaranteed maximum price. The document divides the construction manager’s services into two phases: the preconstruction phase and the construction phase, portions of which may proceed concurrently in order to fast track the process. A133–2009 is coordinated for use with AIA Documents A201™–2007, General Conditions of the Contract for Construction, and B103™–2007, Standard Form of Agreement Between Owner and Architect for a Large or Complex Project.


Design-Build

ConsensusDOCS

ConsensusDOCS 410 Agreement and General Conditions Between Owner and Design-Builder (Cost Plus with Guaranteed Maximum Price)
ConsensusDOCS 410 is a balanced document that addresses the entire design-build process. This Agreement addresses risks associated with relatively new construction issues, such as the use and maintenance of electronic data, while clarifying several risk provisions common to most standard form design-build Agreements. For example, this Agreement simplifies claim procedures, identifies excusable compensatory damages, and adopts the limited consequential damages provision that has become popular among Contractors and Owners.

American Institute of Architects

A141™–2004, Agreement Between Owner and Design-Builder

AIA Document A141–2004 replaces A191™–1996 and consists of the agreement and three exhibits: Exhibit A, Terms and Conditions; Exhibit B, Determination of the Cost of the Work; and Exhibit C, Insurance and Bonds. Exhibit B is not applicable if the parties select to use a stipulated sum. A141–2004 obligates the design-builder to execute fully the work required by the design-build documents, which include A141–2004 with its attached exhibits, the project criteria and the design-builder’s proposal, including any revisions to those documents accepted by the owner, supplementary and other conditions, addenda and modifications. The Agreement requires the parties to select the payment type from three choices: (1) Stipulated Sum, (2) cost of the work plus design-builder’s fee, and (3) cost of the work plus design-builder’s fee with a guaranteed maximum price. A141–2004 with its attached exhibits forms the nucleus of the design-build contract. Because A141–2004 includes its own terms and conditions, it does not use A201™–1997.
D. IPD: Single Purpose Entity (SPE) – “Level 4” (beyond Level 3) Collaboration

This is a form of agreement where the team is under a legal entity created for the purpose of a specific project.

American Institute of Architects

AIA C195–2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery

AIA Document C195–2008 is a standard form single purpose entity (SPE) agreement through which the owner, architect, construction manager, and perhaps other key project participants, each become members of a limited liability company. The sole purpose of the company is to design and construct a project utilizing the principles of integrated project delivery (IPD) established in *Integrated Project Delivery: A Guide*. C195–2008 provides the framework for a collaborative environment in which the company operates in furtherance of cost and performance goals that the members jointly establish.

To obtain project funding, the company enters into a separate agreement with the owner. To design and construct the project, the company enters into separate agreements with the architect, construction manager, other non-owner members, and with non-member consultants and contractors. The compensation model in the non-owner member agreements is goal-oriented and provides incentives for collaboration in design and construction of the project, and for the quick and effective resolution of problems as they arise. This highly collaborative process has the potential to result in a high quality project for the owner, and substantial monetary and intangible rewards for the other members.

AIA C196–2008, Standard Form of Agreement Between Single Purpose Entity and Owner for Integrated Project Delivery

AIA Document C196–2008 is a standard form of agreement between a single purpose entity (“the SPE”) and a project owner, called the owner member. C196–2008 is intended for use on a project where the project participants have formed the SPE utilizing AIA Document C195–2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery. C196–2008 is coordinated with C195–2008 in order to implement the principles of integrated project delivery, including the accomplishment of mutually-agreed goals. C196–2008 provides the terms under which the owner member will fund the SPE in exchange for the design and construction of the project. The SPE provides for the design and construction of the project through separate agreements with other members, including an architect and construction manager, utilizing AIA Document C197–2008, Standard Form of Agreement Between Single Purpose Entity and Non-Owner Member for Integrated Project Delivery. The SPE may also enter into agreements with non-member design consultants, specialty trade contractors, vendors and suppliers.
AIA C197–2008, Standard Form of Agreement Between Single Purpose Entity and Non-Owner Member for Integrated Project Delivery

AIA Document C197–2008 is a standard form of agreement between a single purpose entity (“the SPE”) and members of the SPE that do not own the project, called non-owner members. C197–2008 is intended for use on a project where the parties have formed the SPE utilizing AIA Document C195–2008, Standard Form Single Purpose Entity Agreement for Integrated Project Delivery. C197–2008 is coordinated with C195–2008 in order to implement the principles of integrated project delivery, including the accomplishment of mutually-agreed goals. All members of the SPE, other than the project owner, will execute C197–2008. C197–2008 provides the terms under which the non-owner members provide services to the SPE to complete the design and construction of the project. The specific services the non-owner members are required to perform are set forth in the Integrated Scope of Services Matrix, which is part of the C195–2008 Target Cost Amendment and is incorporated into the executed C197–2008. In exchange for the non-owner members’ services, the non-owner members are paid the direct and indirect costs they incur in providing services. Additionally, C197–2008 allows for the non-owner members to receive profit through incentive compensation and goal achievement compensation.
Bamberg One School District ("District") requests the submittal of Qualifications and Proposals for

ARCHITECTURAL AND ENGINEERING SERVICES
FOR AN INTEGRATED PROJECT DELIVERY

There are three (3) projects:

(1) A New Grades 4K to 6 Elementary School based on a Prototypical Design, for 1000 Students,

(2) Selective Demolition, Moderate Renovations, and Minor Classroom Addition to Existing Middle School (c. 53K sqft.) (305 enrollees in grades 6-8 in 2009), and

(3) Extensive Phased Renovations of Existing High School (c. 110K sqft.) (462 enrollees in grades 9-12 in 2009).

NOTE: Projects (2) and (3) will include new roofing, new HVAC systems, new kitchen equipment, and other upgrades and repairs as determined upon inspection and consultation with the selected design professional and the District. It is known that priorities for these are (a) an extensive HVAC / Air Quality upgrade, (b) roofing replacement, and (c) electrical upgrades. The High School presents significant challenges compared to the Middle School, in terms of existing conditions to be upgraded and/or remediated for a successful outcome.

AWARDS MAY BE SEPARATE: An award, if any is made, may be made separately for any one or more projects, as the District deems most appropriate upon due consideration of the responses and the needs of each project. The District may elect not to consider a firm for a second award if the District determines a division of the projects between firms is in the District's best interest.

Responses shall be submitted to:

Architectural Solicitation Responses
Bamberg One School District
3830 Faust St.
Bamberg, S.C. 29003
KEY EVENTS / DATES (all dates 2010)

1. Issuance\(^1\) of Request for Responses: May 6
2. Deadline for questions other than in response to Site Tour:* May 14
3. Site Tour (assemble in Middle School Gymnasium at 1:00 p.m.):\(^2\) May 27
4. Deadline for questions after Site Tour:* June 3
5. Deadline for receipt of the formal response (5:00 p.m.): June 11
6. Anticipated Date of Short-Listing Notice(s): June 25
7. Anticipated Date of Interviews: July 12-15
8. Anticipated Date of Notice(s) of Intent to Award: July 30

* Questions will be answered by Addendum posted on the District web page as promptly as possible after receipt. Direct all questions in writing via fax or e-mail to: Attn: Architectural Services Solicitation Question, c/o Mrs. Phyllis Schwarting, Superintendent at address: pschwarting@bamberg1.net or 803-245-3056

SUBMISSION REQUIREMENTS

Submit two (2) copies of a submittal meeting the following requirements. Also submit a single compact disc containing the complete response in PDF format as a single file. Please title the file with the name of the proposer. The proposal shall speak for itself on behalf of the proposers. Proposers are discouraged from submitting supplementary materials or from making calls upon the District after the proposals have been submitted. Failure to comply with format requirements may cause the submittal to be removed from further consideration.

1. **Letter of transmittal** – Limit of 1 page.

   The letter shall be signed by the proposed Principal-in-Charge, who shall be the firm's point of contact during the solicitation and evaluation process. Include contact information for the Principal-in-Charge. Indicate for which project(s) the firm is seeking consideration.

2. **Criteria-referenced discussion** – Limit of 10 pages total.

   Submittals shall be simple, concise, neatly assembled, and pages shall be uniform in size and securely bound together. It is preferable that hard copies of the proposal can be stacked and stored as flat as possible. The District Selection Committee has no obligation to examine extraneous materials or material incorporated by reference that is outside the size limitations requested.

   Proposing firms shall organize their responses to address the following criteria given the anticipated requirements of each project. Preference is given to responses specifically focused on

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\(^1\) This document and any addenda will be issued exclusively via the Owner's web page in electronic format.

\(^2\) As significant A/E interest in is anticipated, the Site Tour is being arranged on a half-day of school so as not to disturb school activities. No other Site Tour will be provided.
how the firm and consultants meet the criteria for these projects. It is not necessary to duplicate information also available in the SF-330 being filed.

(a) past performance of proposer and proposed consultants, including but not limited to:
   (1) Established successful working relationships with OSF and DHEC;

(b) ability of professional personnel including consultants, including but not limited to:
   (1) Capability and experience in Integrated Project Delivery;
   (2) Integration of the design and contract administration functions;

(c) demonstrated ability to meet time and budget requirements, including but not limited to:
   (1) Designs that are constructible, functional, durable, and easily maintained;
   (2) Problem-solving capability and experience;
   (3) Ability to optimize use of resources to meet priorities;

(d) location and knowledge of the locality of the project and local conditions affecting the design and the Work, including but not limited to:
   (1) Local topographic and geophysical conditions;
   (2) Regional construction and materials markets;

(e) creativity and insight related to the project, including but not limited to:
   (1) Demonstrated understanding of District priorities and goals;
   (2) Design concepts readily transferrable to suit the District's needs;
   (3) Record of ability to translate owner needs into designs that are responsive to the owner's budget and schedule;

(f) current and past clients' satisfaction with the proposed team, including principal in charge, project manager and consultants;

(g) demonstrated expertise and success in timely construction-phase services, including contract administration and close-out;

(h) knowledge and proficiency in administration of projects subject to Federal requirements by virtue of the use of proceeds of Qualified School Construction Bonds and Build America Bonds to finance the projects.

(i) the following additional criteria:

   (1) FOR THE ELEMENTARY SCHOOL:
      Adaptability of a prototype design that fills District needs is critically important.
(2) FOR THE RENOVATIONS:
Evaluations for the renovations projects will place a special emphasis on the experience and qualifications of the proposed consultants, and on the A/E team's demonstrated qualifications and successes in complex, phased renovations with other districts and general contractors.

3. For Proposals Requesting Selection to Design the Elementary School – no more than five (5) pages:

The owner strongly desires to realize schedule and A/E fee savings by using a successful design prototype that has already been developed under South Carolina curricular and building standards and successfully constructed for a satisfied South Carolina school district owner.

Therefore, the proposer shall include, in no more than five (5) pages inclusive of graphics and text, a description of the proposer's best (as explained in your own words) elementary school design for approximately 1000 students which has been approved as to design by the South Carolina Office of School Facilities, which has been constructed or is nearing completion of construction, and which the proposer is legally able and prepared to submit, with minor modifications upon consultation with the owner and contractor (if retained during design), on behalf of the owner for this project. In addition, the description should answer the following questions about the referenced design:

1. Why have you selected this as the "best" design for this solicitation response?
2. What did your firm learn during its design and construction that would improve design, construction, and specifications for another use of the design?
3. Assuming a suitable site and only minor revisions to the existing design, approximately how much quicker than a new design could the firm reasonably expect to produce Construction Documents based on this design?
4. Provide contact information for the building's owner and the project's general contractor.

4. SF-330

a. Complete and submit a GSA Form SF-330 for the elementary project.
b. Complete and submit a GSA Form SF-330 for the renovations projects.
c. Continuation sheets are discouraged.

REVIEW AND EVALUATION

POTENTIAL AND ACTUAL PROPOSERS SHALL NOT CONTACT MEMBERS OF THE BOARD OF TRUSTEES OR THE DISTRICT SELECTION COMMITTEE AT ANY TIME.
DURING THE EVALUATION AND SELECTION PROCESS WITH THE PURPOSE OF INFLUENCING THE OUTCOME OF THE COMPETITION. All communication concerning the solicitation shall proceed through the Superintendent or a designee.

Following receipt of information from all interested persons and firms, a District Selection Committee shall hold interviews with at least three proposers who are deemed qualified on the basis of information available prior to the interviews. The District may create separate lists, by project, of short-listed firms. A list of firms selected for interview shall be sent to all firms that submitted information in response to the advertisement, prior to the date selected for the interviews.

The firm's proposed Principal-in-Charge must attend the interview and be accompanied by the proposed additional licensed architects, project managers, and licensed engineers. No more than one person who is not actively engaged in the licensed practice of architecture, licensed practice of engineering, or project management activities, may accompany the team in the interview.

The primary purpose of the interviews shall be to provide such further information as may be required by the selection committee to fully acquaint itself with the relative qualifications of the short-listed firms with regard to the project(s) and the owner's needs. Elaborate one-sided presentations are discouraged, the Owner's preference being for an interactive discussion of key issues and to hear the proposers' responses to interview questions. Questions will not be distributed to interviewees in advance.

Following interviews, any additional reference checks, and site visits the Selection Committee or its designees chooses to make in the evaluation process for each project, the selection committee shall identify and rank the firms which, in its judgment, are well qualified to perform architectural services necessary to the District's capital program. The highest-ranked firm shall have the first opportunity to negotiate a contract for the required services, followed by the second-highest ranked firm, and so forth.

Any contract formed hereunder will provide for (1) termination for convenience without liability for lost profits, overhead, consequential damages, third-party reliance upon the continued existence of the contract, or any other measure of damages or restitution; (2) exclusivity of the dispute resolution procedures of the District’s Procurement Code; (3) procedural joinder of all parties to the project as necessary in the opinion of the District for resolution of disputes with common or related facts or legal responsibilities; and (4) the District's right to approve key personnel and consultants.

When it appears an acceptable contract has been negotiated, the contract will be presented to the District's Board of Trustees for its approval or rejection.

### END OF SOLICITATION DOCUMENT ###
Bamberg One School District ("District") requests proposals for

INTEGRATED PROJECT DELIVERY CONTRACTOR(S)

RESPONSES DUE FRIDAY, OCTOBER 29, 2010

Projects:

(1) A New Grades 4K to 6 Elementary School (1000 student core). The architect is Jumper Carter Sease of West Columbia, SC; and

(2) Selective Demolition, Moderate Renovations, and Minor Classroom Addition to Existing Middle School (c. 53K sqft.) (305 enrollees in grades 6-8 in 2009), and Extensive Phased Renovations of Existing High School (c. 110K sqft.) (462 enrollees in grades 9-12 in 2009). The architect is AAG Architects of Beaufort, SC.

The Owner has a total program budget, inclusive of all hard and soft costs, of $29 million dollars. The Owner's scheduling goal is to occupy the new Primary School for the 2012-2013 academic year. The Owner's goal for the High School and Middle School project is to phase work with minimal disruption of academics, and if possible to be complete by the beginning of the 2012-2013 academic year.

The Owner expects that an award, if any is made, will be made separately. However, the Owner reserves the right to combine the Projects into a single award if the qualifications of a respondent or other factors indicate that the best interest of the Owner would be served by doing so. At any time and for any reason, the Owner reserves the right to cancel this solicitation in whole or in part.

Questions will be answered by Addendum posted on the District web page. Direct all questions through the Owner's Representative, Dale Collier of The Brownstone Group at: dcollier@bstonegroup.com

Responses shall be submitted NO LATER THAN FRIDAY, OCTOBER 29, 2010 to:

ATTN: CONTRACTOR RESPONSE
Bamberg One School District
3830 Faust St.
Bamberg, S.C. 29003
SCOPE OF WORK

The Owner is using the 2008 AIA Integrated Project Delivery series as the basis for the contractual agreements for the Projects. Therefore, the Scope of Work is as stated in:

- AIA A195-2008 Standard Form of Agreement Between Owner and Contractor for Integrated Project Delivery
- AIA A295-2008 General Conditions of the Contract for Integrated Project Delivery

Additionally:
- Meet American Recovery and Reinvestment Act ("ARRA") requirements.
- Meet South Carolina immigration-relating hiring requirements at all tiers.
- A criminal history / sex offender registry check policy will apply to on-site personnel.
- Owner is strongly committed to a W/DBE outreach program and work packaging to permit qualified local businesses and laborers an equitable opportunity to compete.
- Commence preconstruction phase services immediately upon award.
- Excel at overcoming complicated phasing and life-safety challenges at occupied sites for the middle school and high school project.

SUBMISSION REQUIREMENTS

1. Transmittal / Cover Letter. (2 pages maximum)

2. State your qualifications, experience, and ability to perform the project-specific requirements of the contracts for these Projects, as set forth in the Scope of Work. (15 pages maximum)

3. Identify personnel that are proposed, available, and assigned for the Project(s) should your firm be selected. Provide brief resumes including recent, relevant experience of the following team members: Project Executive, Estimator, Project Managers, and Superintendent.

EVALUATION PROCESS

The Owner, Owner's Representative, and design professionals for the Project, will review the responses, references, and other information the Owner deems relevant, to evaluate the respondents' qualifications, experience, and ability to perform the Scope of Work for the Project(s).

Upon determining the respondent(s) most qualified for the Project(s), the Owner shall commence negotiations of compensation, personnel assignments, schedule and other matters. If a suitable agreement cannot be accomplished promptly, the Owner may terminate negotiations and proceed to initiate negotiations with the next most qualified firm. In the interest of negotiations, the names of respondents will not be disclosed prior to the issuance of the Notice of Intent to Award. When a suitable agreement has been concluded, a Notice of Intent to Award will be issued to the respondents and posted in public.
Bamberg One School District ("District") requests proposals for

OWNER'S REPRESENTATIVE
FOR INTEGRATED PROJECT DELIVERY ("IPD")
OF UP TO THREE PROJECTS

There are three (3) projects:

(1) A New Grades 4K to 6 Elementary School based on a Prototypical Design, for 1000 Students,

(2) Selective Demolition, Moderate Renovations, and Minor Classroom Addition to Existing Middle School (c. 53K sqft.) (305 enrollees in grades 6-8 in 2009), and

(3) Extensive Phased Renovations of Existing High School (c. 110K sqft.) (462 enrollees in grades 9-12 in 2009).

NOTE:  Projects (2) and (3) will include new roofing, new HVAC systems, new kitchen equipment, and other upgrades and repairs as determined upon inspection and consultation with the selected design professional and the District. It is known that priorities for these are (a) an extensive HVAC / Air Quality upgrade, (b) roofing replacement, and (c) electrical upgrades. The High School presents significant challenges compared to the Middle School, in terms of existing conditions to be upgraded and/or remediated for a successful outcome.

Firms or individuals may respond. Responses shall be submitted to:

Owner Representative Proposal
Bamberg One School District
3830 Faust St.
Bamberg, S.C. 29003
**KEY EVENTS / DATES (All 2010)**

1. Issuance of Request for Responses: May 6
2. Site Tour – meet at Middle School front entrance at 3:00 p.m.: May 18
3. Deadline for receipt of questions:* May 21
4. Deadline for receipt of the formal response by 5:00 p.m.: June 8
5. Interviews: TBD

* Questions shall be submitted in writing via mail or e-mail. Questions will be answered by Addendum posted on the District web page. Direct questions by **e-mail only** to: Attn: Owner's Representative Solicitation Questions, c/o Mrs. Phyllis Schwarting, Superintendent, Bamberg One School District, 3830 Faust St., Bamberg, S.C. 29003, pschwarting@bamberg1.net.

**AWARDS MAY BE SEPARATE:** An award, if any is made, may be made separately for any one or more projects, as the District deems most appropriate upon due consideration of the responses and the needs of each project.

**REQUESTED SCOPE OF WORK**

In General – the Owner's Representative shall be a seasoned construction professional with experience in similar projects, who shall perform, subject to the direction and decisions of the Owner, the role of Owner's Representative as generally described in these AIA Documents: (1) A295-2008, General Conditions of the Contract for IPD; (2) B195-2008 Owner-Architect Agreement for IPD; and (3) A195-2008 Owner-Contractor Agreement for IPD. The Owner's Representative will be an agent of the Owner and shall owe duties of care and loyalty to the Owner. Demands on the individual's time and energy will vary with the progress and stage of the building program.

Other elements of the general Scope of Work

1. **General Duties During Design and Construction Phases.**
   .1 Review project concept and budget to assure that the project is financially feasible within the overall context of the program. Validate project budgets and schedules prior to proceeding to next design phase.
   .2 Attend IPD team meetings for the duration of the Project; review and comment on the minutes.
   .3 Track all Project costs.
   .4 Monitor and coordinate activities of Owner’s personnel involved in the Project.
   .5 Issue relevant reports to Owner, such as cost summaries, contingency reports, budget variance reports, and other reports relating to the Owner’s budget and project schedule, and issues or concerns with the Project.
   .6 Advise and assist Owner regarding any issues relating to the impact of any proposed changes to scope on the Project.
   .7 Review documents at established intervals during Design and
Construction Document phases for constructability, clarity, consistency, and completeness.

.8 Evaluate cost analyses and value engineering recommendations.
.9 Continuously review program and project budgets and recommend action, if needed, to maintain program and project budgets.
.10 Assist Owner in obtaining services such as surveying, geotechnical services, materials testing, inspections, etc. and assist as needed in evaluating proposals for services from the IPD team.
.11 Assist in the development of the plan and schedule for acceptance and occupancy of the Work that addresses timely procurements of furnishings, fixtures and equipment, and moving services. Incorporate these needs into the project schedule.
.12 Assist Owner with reviews of the Contract Documents and make recommendations for the same.

2 Construction Phase. Continue foregoing services as needed and:

.1 Maintain sufficient presence for the duration of the Construction Phase until substantial completion has been achieved
.2 Participate in all job site meetings attended by the architect, general contractor and/or the Owner and other such meetings as required by the Owner.
.3 Evaluate quality of Work and ensure that construction conforms to the contract documents.
.4 Assist Owner with its responsibilities and rights in regard to matters regarding design phase services, submittals, claims, change orders, requests for information (RFI), pay requests, and related activities for construction phases.
.5 Assist Owner with its responsibilities and rights in review of designer and contractor pay requests, amend and advise Owner concerning Certification for Payment.
.6 Make observations and recommendations to the Owner regarding its responsibilities and rights in cases of rejection and correction of substandard or non-complying work.
.7 Coordinate “special inspections” as set forth in the IBC Chapter 1 & Chapter 17 regulations with the design professional and general contractor, maintain and organize all Owner-side project inspection records
.8 Review and make recommendations regarding Owner responsibilities and rights in regard to the architect's project reports and prepare comprehensive monthly project summary as appropriate.
.9 Review and make recommendations regarding Owner responsibilities and rights in regard to contractor-submitted change orders and time extensions. Assist in negotiations as directed.
.10 Review claims submitted and make recommendations to the Owner in regard to the same.
.11 Perform periodic observations and make recommendations to the design
professionals and general contractors.

.12 Assist as needed with obtaining the final certificates of occupancy and completion.

.13 Coordination of start-up and commissioning activities with Owner staff.

.14 Review the Project schedule, closely monitor changes or deviations from the schedule, and identify critical elements of the schedule, including Owner-required milestones.

.15 Assist Owner in selection and coordination of professional services by surveyors, special consultants, inspectors, and testing laboratories required for the Project, including verification of scope, cost, and schedule for completion.

.16 Report monthly on the status of Owner-furnished furniture, fixtures, equipment, signage, and information technology services.

.17 Monitor the status of the agreements with the Architect and General Contractor, including any pending changes, deviations, or additional service requests.

3 Post-Construction Phase. Continue foregoing services as required and:

.1 Verify delivery of as-built drawings, guarantees, warranties, and other record documents to the Owner.

.2 Assist in the implementation of the occupancy plan and schedule.

.3 Assist in final project cost reconciliations, obtain, and distribute closeout reports appropriately.

.4 For items or services provided by the Owner, coordinate all vendors, subcontractors, and suppliers as related to the project; i.e. furniture, fixtures, and equipment (FFE), security - surveillance equipment, information technology (IT) equipment, etc.

.5 Coordinate technical/operations training of Owner’s maintenance and management personnel for building support systems.

.6 Assist with project close-out; coordinate and verify the completion of such items.

SUBMISSION REQUIREMENTS

Submit one original and one paper (1) copy of a submittal meeting the following requirements. The proposal shall speak for itself on behalf of the proposers. Proposers are discouraged from submitting supplementary materials or from making calls upon the District after the proposals have been submitted.

1. Transmittal / Cover Letter. (Limit 1 pages.) Include contact information.

2. Professional resume of the specific individual proposed to serve as the Owner's Representative. Include at least three (3) references of owners of similar projects, three (3) references of architects or engineers, and three (3) references of general contractors, all of will be familiar with the proposed individual's experience and capabilities with regard to the general Scope of Work. (Limit of 5 pages.)
3. If the proposer is other than an individual, also provide basic identification, a summary background of the firm or company making the proposal, and references. (Limit 3 pages.)

4. On a single page, state a fee and reimbursable expense proposal. (Assume the Owner will provide office space, normal office equipment, routine supplies, a computer with relevant software, voice and data telecommunications, and other supply-type items to enable satisfactory performance of the Scope of Work.) Proposals may be in the alternative, and may be based in time, lump sum, or percentage bases. This section should clearly allow the Owner to determine an approximate cost of the proposal, with regard to the $29-million three-project building program, which is expected to last approximately two-and-a-half to three years.

5. Proposals may include up to five (5) additional pages of supplementary materials of the proposer's choosing.

**EVALUATION PROCESS**

The Owner will review the proposals, references, and any other information the Owner deems relevant. The Owner will evaluate the proposals on the basis of (1) professional qualifications; (2) professional experience; (3) past client satisfaction; and (4) value to be received in exchange for cost. The Owner intends to conduct interviews with at least a "short list" of proposers determined after an initial review of information.
BAMBERG COUNTY SCHOOL DISTRICT ONE
RENOVATION PROJECTS
PROJECT MEETING MINUTES
December 1, 2010 – 2:00 P.M.

Those in Attendance:
Mr. Ben Thompson  AAG Architects
Mr. Shane Lather  AAG Architects
Ms. Phyllis Schwarting  Bamberg County School District One
Mr. Randy Maxwell  Bamberg – Ehrhardt High School
Mr. Dale Collier  Brownstone Construction Group

Copies
Mr. Robbie Kearse  Bamberg County School District One
Mr. Keith Powell  Childs and Halligan
Mr. Troy Phillips  Bamberg – Ehrhardt Middle School
Mr. Skipper Smith  Richard Carroll Elementary School

Bamberg-Ehrhardt Middle School Additions and Renovations
Per prior meetings, the group agreed that the plan for the Middle School was complete to include required spaces as well as work to provide a new front exterior for the building that complements the existing residential area. Thompson briefly reviewed the plan and noted that adjustments requested by the Owner had been incorporated. He also acknowledged receipt for Schematic Review Comments from Collier. Thompson further updated the group that consulting engineers for the project had completed their assessments of building systems for use in the design. He noted that several building systems were adequate to be reused to include several HVAC units and the fire alarm. Thompson stated that one concern to be addressed is that the main Electrical Room for the campus is located in the existing Allen Building that is to be demolished.

Collier updated the designers by noting that Thompson-Turner Construction was approved by the School Board to be the contractor for both renovation projects and would now be able to provide preliminary pricing to give the Owner/Team a construction budget figure for the work. After completing an estimate for the Middle School, remaining funds from the $10M budget could be allocated for the High School.

Lather indicated that he had briefed representatives of Thompson-Turner regarding the planned work and further agreed to provide current drawings to the contractor for pricing. Collier said the he would also be coordinating with the contractor in order to get their involvement in future planning meetings for both renovation projects.

POST MEETING NOTE: Collier subsequently met with Mr. Hal Turner of Thompson-Turner and reviewed the project with the contractor who agreed to provide budgetary pricing for the planned work. Thompson-Turner will also attend the next meeting.
Bamberg-Ehrhardt High School Additions and Renovations

Thompson noted that he had previewed elevations for the High School project during his recent School Board update. During the meeting, he took the opportunity to give further explanation regarding the new front facade of the facility which contains similar elements to the Middle School to complement the residential area. The group readily accepted the design that includes new construction elements at the Main Entrance and at a planned Media Center addition. The indicated frontage also “cleans up” an area where the Kitchen Dumpster is to be relocated to the rear of the school.

Inside the building, Thompson reviewed the new layout being considered for the school and noted that multiple corridors in the current building would be simplified with visual control points being provided for staff persons at intersections. A 3-hour firewall remains indicated immediately adjacent to the existing Gym in the school. Thompson noted that several classrooms will be affected at this wall; however, spaces on the Gym side of the new wall would receive minimal upgrades beyond general cosmetics, ADA upgrades and the extension of a required new sprinkler system. He and Maxwell agreed that spaces indicated have been reviewed and a space is provided to accommodate each school staff member.

Thompson and Lather then described Three (3) Areas of the building and noted the scopes of work to be considered for each vicinity:

Area 1 – Gym: General cosmetic upgrades including sprinkler and Gym/Stage upgrades as noted above. Maxwell noted that several existing spaces in this area (Wrestling Room, etc.) can also be used to accommodate teaching spaces that are affected during the renovation of other areas of the school. Collier reminded the designer that the bulk of funds to be spent on this side of the firewall would be designated for upgrades at the Gym for public events as previously requested by the Owner.

Area 2 – Main Office, Media Center, Kitchen, Classrooms: Thompson described this area to be the core of the school where the bulk of construction and renovation will take place. Per prior meetings, he noted that the Kitchen was relocated to the rear of the school while the Media Center is moved to the front of the school within the new addition. The existing Guidance area of the school is also converted into the Main Office entry area of the school with a new addition. At the interior, corridors have been re-arranged as previously described.

Lather and Thompson noted that one major decision must be reached prior to proceeding with the design. They said that building codes will require that either another 3-hour fire wall be added in this area OR above ceiling structural steel members must be spray-fire-proofed. Lather estimated that these two costs may be equal or “a wash”; however, the time required for either work item must be considered as the installation of both fire walls would have to be completed during the summer time frame. Collier said that with Thompson-Turner approved for the project, the contractor would be asked to evaluate and price each scenario for Owner consideration. POST MEETING NOTE: Collier has since met with the contractor and asked that comparative pricing be provided.
Area 3 – Recent Classroom Addition: Thompson described this area as the most recent new construction on campus and noted that it would require minimal upgrades, if any. He acknowledged that with an existing 3-hour wall already in place, this area may not have to be fully sprinklered unless desired by the Owner.

After completing the overview of the design, Thompson stated that he understood that the budget may not support the more expensive option of relocating the Kitchen to the rear of the school building. He then presented a less costly OPTION 2 for the High School Renovation that retained an identical front façade expansion designated as a Commons Area adjacent to the existing Kitchen to remain. The layout indicated classrooms previously noted in the Kitchen area to remain in the center core of the building. Upon reviewing the layout, staff persons requested that the designer revise the central core area of the building to retain a center corridor similar to the first design option. Thompson agreed to make the revision and said that he would consider re-arranging the entrance to the Media Center so it aligns with the new center corridor.

Thompson stated that, similar to the Middle School, consulting engineers for the project had completed their assessments of building systems for use in the design. He noted these engineering assessments were included in the presentation material provided to the group during the meeting.

During further discussions, Lather suggested that the Owner consider the use of more durable Type “X” sheetrock at interior walls that will be contain marker and tack boards. Collier agreed to coordinate with the contractor(s) for the projects to see if a sample wall could be constructed for Owner review.

The group agreed that Phasing of the work will have to be discussed with the contractor for each project. Lather suggested that formal meetings be considered with OSF officials in order to gain approval for work scopes as well as minimum requirements to allow students back into the school building after summer work that will not complete the entirety of the project.

Per Collier’s suggestion, Maxwell agreed to inquire about the ownership of a vacant lot along the street between the Middle and High School campuses. Collier said that this area may be considered as a central “lay-down” area for both projects since the work will be done by one contractor.

Thompson acknowledged that skylights indicated at corridor intersections of both the Middle and High School projects may not be supported by the project budget.

Update on Other Work Items
Collier has prepared Schematic Review Comments for the B-E Middle School Plan for incorporation by the design team. AAG has agreed to submit formal Schematic Design Plans for the new school to OSF so that it will remain under the current 2010 OSF Guidebook requirements.
Thompson-Turner Construction Company was selected and approved by the Bamberg School Board as the general contractor both the Middle and High School projects. The contractor has been provided preliminary plans for cost estimating by the architect. Representatives from Thompson-Turner will now be included in future project meetings.

GS2 Engineering & Environmental has been given a Purchase Order to complete a needed Soils Report for the project. GS2 was awarded similar work for the New Richard Carroll Elementary School by the Owner and has agreed to provide pricing quotes to prepare Soils Reports for the B-E Middle and High School Renovation projects. POST MEETING NOTE: GS2 workers agreed to mobilize on each site to complete borings in locations identified by the contractor during the week of December 13, 2010.

END OF MEETING

NEXT MEETING
DECEMBER 15, 2010 AT 2:00PM
BAMBERG COUNTY SCHOOL DISTRICT OFFICES
(PRELIMINARY COST ESTIMATE TO BE RECEIVED FROM THE CONTRACTOR)

The meeting was concluded at approximately 4:00 P.M. The contents of the meeting minutes noted above are the writer’s interpretation of the primary discussions held during the course of the meeting. Should the information listed herein be misleading or inaccurate in any way, please notify the writer within seven (7) days after receipt.

AAG Architects will be responsible for the distribution of these meeting minutes to the appropriate consultants as deemed necessary.
Thompson opened the meeting by noting that AAG had prepared preliminary site and floor plan ideas for consideration by the Owner. He also confirmed receipt of previously requested items and noted the following activities that had occurred since the last meeting.

- Middle School and High School digital files were received for use in the design
- AAG has met with consultant engineers who have visited each school
- Code issues related to each building have been reviewed
- MS teaching space counts have been received from the Owner for programming
- MS concept design were complete for review by the Owner during the meeting

**Bamberg-Ehrhardt High School Additions and Renovations**
Per prior discussions, programming and design for this school will be held until the scope of work for the Middle School is finalized. The anticipated $10M budget for the combined schools will be distributed, with the bulk of the funds anticipated to go toward the High School.

**Bamberg-Ehrhardt Middle School Additions and Renovations**
Thompson presented an overall site plan of the existing school and described current conditions. He then overlaid the architect’s proposed new work site plan that indicated the demolition of the Allen Building to allow fire truck access complete around the building. The removal of the building will also allow the incorporation of a new play area in the location of the building. Also shown on the plan was a Pavilion area that was discussed in the previous meeting.

Thompson then presented a proposed floor plan for the existing building to be renovated. He walked the group through the plan and noted the following upgrades that were being recommended.
Demolition of the Allen Building to allow area for the new play space
Addition of three (3) classrooms in the area of the Allen Building demolition and adjacent to the front classroom wing.
Renovation of the Kitchen / Cafeteria to relieve serving line congestion concerns
Kitchen renovation to include new equipment only
Expansion of the Front Office / Admin area to give the building a new entrance
Renovation of the former Shop Building for Music and Art Classrooms
Addition of 3-hour fire walls in the existing building per code requirements
Major renovations for ADA Toilets, Resource Classrooms

District staff persons were pleased with the new layout; however, directed that the following modifications be made:
Two wings of the building to be dedicated for 6th and 7th Grades respectively with six (6) classrooms to be provided for each grade level.
Re-arrange classrooms at the rear wing of the school to locate classrooms together and offset existing walls of existing spaces as needed.
Provide a space for a Book Room (within the footprint of the current building)
Provide a separation wall between the Kitchen and Cafeteria spaces
Restrooms at the main entry of the Gymnasium to be considered for upgrade
Re-finishing bleachers in the existing gym should be priced.

Thompson and Lather cautioned against doing major work in the Media Center area beyond the 3-hour wall noted at the Cafeteria. Similarly, they suggested that minimal work be done in the Gymnasium building as these areas should be designated for maintenance type renovations that would not require spaces to be brought completely up to current code requirements. Work suggested at toilets beneath Gym bleachers will not be part of the work due for this reason.

It was agreed that, budget permitting, general upgrades for the entire building would include the following work.
Roofing repairs – Existing building to be reviewed to note recent repairs
HVAC upgrades – Staff noted that units were recently replaced at classrooms at the wing near the front of the school
Flooring
Painting
Fire Alarm
Lighting and Ceilings
Skylight as indicated on plans at the main corridor intersection of the facility.

Thompson requested that BCSD provide any available asbestos reports for existing buildings on the campus.

The group agreed to further discuss Project Phasing that will coordinate work at the school while it is fully occupied during upcoming meetings. Thompson suggested that approximately four (4) portables could be utilized to relocate students from areas that are being renovated.
Powell noted that he had prepared an advertisement for General Contractor Qualifications to be received by the District. He noted that qualification packets would be received from interested builders on Friday of the week of the meeting. After some discussion, it was agreed that interviews would be conducted with short-listed contractors prior to being selected. The following schedule was then agreed upon.

- October 29, 2010: Receive GC Qualification Packages
- November 3, 2010: Prepare short list of contractors to be interviewed
- November 20, 2010: Interview short-listed contractors and make selections

Powell acknowledged receipt of contract comments from the architect and met with Thompson after the meeting to discuss A/E contract issues.

END OF MEETING

NEXT MEETING
NOVEMBER 3, 2010 AT 10:00AM
BCSD1 DISTRICT OFFICES

The meeting was concluded at approximately 12:00 P.M. The contents of the meeting minutes noted above are the writer’s interpretation of the primary discussions held during the course of the meeting. Should the information listed herein be misleading or inaccurate in any way, please notify the writer within seven (7) days after receipt.

AAG Architects, will be responsible for the distribution of these meeting minutes to the appropriate consultants as deemed necessary.
Brownstone Construction Group

1213 Lady Street – Second Floor, Suite 214 - Columbia, SC 29202 - Phone (803)376-6044 - FAX: (803)376-6099

BAMBERG COUNTY SCHOOL DISTRICT ONE
RENOVATION PROJECTS
PROJECT MEETING MINUTES
January 19, 2011 – 10:00 A.M.

Those in Attendance:
Mr. Ben Thompson   AAG Architects
Mr. Shane Lather   AAG Architects
Mr. Tim Heichelbech  Thompson-Turner Construction
Mr. Jay Lee   Thompson-Turner Construction
Mr. Todd McElveen  Thompson-Turner Construction
Mr. Marion Gunter  Thompson-Turner Construction
Mr. Cole Owens  Owens and Associates
Mr. Miles Jordan  Owens and Associates
Mr. Billy Ott  Bamberg County School District One
Mr. Van Sanders  Bamberg County School District One
Ms. Phyllis Schwarting  Bamberg County School District One
Mr. Robbie Kearse  Bamberg County School District One
Mr. Randy Maxwell  Bamberg – Ehrhardt High School
Mr. Troy Phillips  Bamberg – Ehrhardt Middle School
Mr. Skipper Smith  Richard Carroll Elementary School
Mr. Dale Collier  Brownstone Construction Group

Copies
Mr. Keith Powell   Childs and Halligan
Mr. Ricky Albertson  Bamberg County School District One

Bamberg-Ehrhardt High School Additions and Renovations
Collier opened the meeting by welcoming the attendees to the discussion and allowed each to introduce themselves. He then allowed Thompson to update the group regarding the designers’ recent meeting with OSF. Thompson noted that he and Lather had a successful meeting with OSF’s Howard Coogler and reviewed each project in detail in order to avoid delays during the design review process. He and Lather announced the following resolutions that were secured from the agency.

High School OSF Meeting Outcomes
- Phasing plan was OK’d as proposed
- Partial occupancies to be obtained during construction to include Area 1 (Gym) work and completion of the Gym firewall this Summer
- Second firewall considered in Area 2 (Core Area) is not required.
- Fire spray of Area 2 above ceiling is not required
- All Storage Rooms must be upgraded to have fire-rated walls
- Water Source Heat Pump system in Area 2 must be replaced
- No work is required to be done in Area 3 (most recent addition)
Thompson noted that he had conducted an Engineering Kickoff Meeting with the design team to get mechanical, plumbing and electrical designs underway. He said that engineers had also completed walkthroughs of each school to assess the status of building systems.

Additionally, Thompson informed the group that the Food Service Consultant was now engaged in the project and had visited each building. The consultant had also met with the District’s Food Service Director and will forward recommendations regarding the reuse of existing equipment that is in good condition.

Thompson said that he would be meeting with Mr. Bruce Ellis of the Town’s Board of Public Works later in the day to review requirements.

As the group continued, the following information was relayed regarding the project.

- Smoke hatches will be updated for re-use at the Gym Stage
- Owens said that HVAC in Area 1 will be changed from Water Source Heat Pumps to Air-to-Air Rooftop Heat Pumps
- Gunter said that the cost estimate will be updated to replace fiberglass HVAC ductwork with metal type in Area 1.
- Lather confirmed that the building will be designed per Seismic Zone D requirements. Lee and Gunter confirmed that pricing reflects this classification.
- Lather noted that 800SF classrooms will be provided where updated adjacent to the new firewall
- Fire Alarm and Sprinkler systems will have to be completed at Area 1 prior to allowing re-occupancy of the building by students. Lather said that the sprinkler system will be zoned independently for Area 1
- Jordan indicated that electrical upgrades at the school will be standard with no new electrical service or transformer anticipated

During discussions about the proposed Kitchen Relocation, Collier questioned why the entire kitchen was being renovated in the design scheme that indicated the space to remain in the same general location. Lather responded that OSF has mandated that the kitchen be upgraded in both work scenarios being considered as the existing kitchen is non-compliant with respect to current code requirements. Thompson acknowledged that each plan rearranges the kitchen in its entirety and estimated that $250K of cost would be allocated for equipment alone. Gunter added that due to the extensive below slab work, only $50K in cost difference would be realized if the Kitchen remains at the front of the building. He said that a new grease trap would be needed if the area is moved to the rear of the school. He cautioned, however, that renovation of the kitchen at its current location would mean that the school would be without the use of the kitchen while work continues into the start of school in August.

Gunter said in either instance, pricing estimates will remain above the targeted $10M budget for both renovation projects. Schwarting then reiterated that there were no additional monies available to fund the projects. Gunter further stated that 60% of costs are related to “must-have” mechanical, plumbing, electrical, roofing, and other system upgrades.
In light of the budget impasse, Collier convened several “side bar” discussions with the staff and designer during a break in the meeting. After these discussions, Schwarting approved the following scope of work to be implemented for the High School project.

**APPROVED “SCHEME C” FOR BAMBERG-EHRHARDT HIGH RENOVATIONS**

- Area 1 and firewall work to continue as approved by OSF and outlined above
- Expand Kitchen in its existing location. BCSD1 to make adjustments as needed to operate without kitchen facilities for a portion of the school year
- Existing Media Center to remain in its current location with minimal upgrades
- Interior Classrooms to be incorporated in existing Commons area with a center corridor leading to the Media Center area
- No work to be done in Area 3 as described above
- Exterior building façade upgraded to be incorporated per original design intent

**Bamberg-Ehrhardt Middle School Additions and Renovations**

Thompson stated that he would be submitting Schematic Design Plans to OSF during the week of the meeting. He noted that during the OSF Meeting to discuss the project, several issues were resolved with the agency to include the following.

**Middle School OSF Meeting Outcomes**

- Middle School (which has fewer code implications) phasing plan accepted
- Portable Classroom plan must be submitted for OSF approval
- New portables must be in same general area and not block fire access around building

During discussions about the building, Jordan noted that the main electrical service for the entire school is routed through the Allen Building that is scheduled for demolition during Spring Break. He said that he would walkthrough the facility with maintenance personnel after the meeting in order to prepare an electrical relocation plan for the project to allow the demolition to occur. Jordan said that the plan will consist of converting an existing free-standing building on campus to house electrical components to be relocated. He explained that to accommodate the schedule, electrical equipment without long lead delivery times will be specified.

Lee added that there will be no “reworking” of power to the Middle School per discussions with Board of Public Works as coordinated with the contractor and the project’s civil designers, Power Engineering. Collier responded that while he has allowed that direct contact can be made by team members with Staff and Town Representatives, he reminded all in attendance to retain documentation of all decisions reached during independent meetings so that all can be “kept in the loop”.

Owens said that similar to the High School, the HVAC system for the Middle School will consist of Air-to-Air Heat Pumps. He confirmed that recently installed roof mounted equipment will be retained at the front wing of the building. Thompson said that direct replacement of Wall Hung heat pumps will be considered at the school’s rear wing. After some discussion, it was agreed that new wall hung units will be ducted at the new classrooms to be added.
Owens confirmed that the kitchen Hood at the school will have to be replaced to meet current code requirements.

The following decisions were reached with regard to the overall project schedule for the Middle School.

- Heichelbech will coordinate with Thompson to finalize the portable plan for OSF review. Thompson and Lather said that OSF has required that a fire access loop be maintained around the existing buildings. Lee noted that the contractor has access to several portables that can be relocated to Bamberg. Collier said that relocations should not start until the location is plan is approved by OSF.

- Heichelbech presented a color-coded Phasing Plan for the building to be presented to OSF with the architects Schematic Plans. When questioned by Collier, he agreed that renovated group toilets will have to be upgraded this summer so students will have continued access to this space during the school year.

- Heichelbech explained that demolition of the Allen Building must start during the upcoming Spring Break in order to meet the schedule. Lee explained that the received Asbestos Update Report could not be used for demolition purposes and said that a new survey would be required for submission to DHEC. Collier and Kearse agreed to contact the District’s Asbestos Consultant, Mr. Carl Brunson to secure this information.

END OF MEETING

NEXT MEETING(S)

SCHOOL BOARD UPDATE
JANUARY 24, 2011 AT 7:00PM
BAMBERG-EHRHDART MIDDLE SCHOOL MEDIA CENTER
(Project Team to be Introduced to the Board with Update Provided)

OWNERS PROGRESS MEETING
FEBRUARY 2, 2011 AT 10:00AM
BAMBERG COUNTY SCHOOL DISTRICT OFFICES

The meeting was concluded at approximately 12:00 P.M. The contents of the meeting minutes noted above are the writers interpretation of the primary discussions held during the course of the meeting. Should the information listed herein be misleading or inaccurate in any way, please notify the writer within seven (7) days after receipt.

AAG Architects and Thompson-Turner Construction will be responsible for the distribution of these meeting minutes to the appropriate consultants as deemed necessary.
BAMBERG COUNTY SCHOOL DISTRICT ONE
RENOVATION PROJECTS
PROJECT MEETING MINUTES
February 2, 2011 – 10:00 A.M.

Those in Attendance:
Mr. Ben Thompson   AAG Architects
Mr. Hal Turner   Thompson-Turner Construction
Mr. Tim Heichelbech  Thompson-Turner Construction
Mr. Jay Lee   Thompson-Turner Construction
Mr. Todd McElveen  Thompson-Turner Construction
Mr. Marion Gunter  Thompson-Turner Construction
Ms. Phyllis Schwarting  Bamberg County School District One
Mr. Robbie Kearse  Bamberg County School District One
Mr. Randy Maxwell  Bamberg – Ehrhardt High School
Mr. Troy Phillips  Bamberg – Ehrhardt Middle School
Mr. Skipper Smith  Richard Carroll Elementary School
Mr. Ricky Albertson  Bamberg County School District One
Mr. Dale Collier  Brownstone Construction Group

Copies
Mr. Keith Powell   Childs and Halligan
Mr. Shane Lather   AAG Architects

Bamberg-Ehrhardt High School Additions and Renovations
Thompson noted that the previously “Scheme 3” has been meshed into a single plan, and said that he will be reviewing the plan with staff later in the day to confirm space layouts. Within the new plan, he stated that the exterior building façade was only modified slightly as drawings do not indicate the relocation of the Media Center to the front of the school. He said that recent Owner requests for a secure entry and secure mailboxes will be included.

With regard to collaborations with Thompson-Turner, Thompson said that progress was being made with respect to pricing the work. He said he felt good about the progress and noted that recent pricing indicated that costs were going down. The floor was then given to Turner to allow his team to give further detail related to prepared cost estimates.

Turner commended the team and noted a great reduction in pricing in response to recent meeting discussions and decisions. However, he stated that bidding Alternates should be considered with the group’s input as a safety factor for the Owner’s consideration. He said that OSF and Code requirements were the driving factor in the majority of projects costs and allowed Gunter to present the updated High School cost estimate to the group.
Gunter noted that after detailed discussions with Thompson and Owens & Associates Engineers, he had revised the attached cost estimate and distributed it to the group for review and discussion. He said that costs included the agreed upon “Scheme 3” changes and highlighted the following with regard to the pricing.

- HS cost estimate of $7.3M is approximately $450K less than prior pricing
- Pricing includes $300K in Contingency
- A previously included second firewall was removed at Area 2; however, additional HVAC replacement work has been added at Area 1 per OSF
- Area 3 work now includes only the extension of HVAC Controls
- Deleted work per prior meetings includes the Kitchen relocation, Media relocation, folding partition, Media Center casework, etc.
- Flooring and ceiling replacements reduced in Area 2 to include work only where necessary: Thompson explained that many floors in Area 2 are “OK as is” and existing classrooms without ceilings will remain “As Is” in order to reduce costs
- Casework and Food Service equipment allowances have been reduced

Gunter clarified that basic code upgrade needs related to OSF and code requirements total $6M of the budget. While being optimistic about maintaining the project budget, Turner said that he felt positive about the potential of securing better actual pricing on bid day. He said that Alternates will be suggested in order to assure getting the Owner in an awardable position after final pricing is received. He said that other subcontractors had been consulted regarding pricing, but noted that MEP prices were noted to be “per square foot” based on discussions with engineers as the contractor did not have drawings for these disciplines. Turner said that Thompson-Turner’s fee was at 7-1/2% to 8% at present but could be reduced as drawings are further developed.

Lee noted that asbestos will have to be abated at the front entry of the school prior to starting the demolition for the new addition.

The following discussion points were covered related to the Design Schedule

- Thompson said that completion of Design Development (DD) plans would take four (4) weeks
- Full specifications will be provided with DD level documents
- Heichelbech said that 100% Construction Documents (CD’s) would be needed in time to allow construction to start by May 30, 2011
- Thompson acknowledged that the aggressive design schedule would be “tough to meet”, but committed to give his best effort
- When questioned by Heichelbech, Schwarting said that per the District’s Attorney, there will be no procurement restrictions placed on the contractor.

When questioned by Kearse, Thompson clarified that an existing classroom will be lost in the area of the new firewall during renovations, but is shown to be replaced at new work in the core area of the building.

Albertson said that the plans must reflect locations of existing systems in the building that must be remain operation throughout construction. He gave direction regarding where existing systems under his purview are located to include the following.
Heichelbech opened discussions related to the project schedule and phasing of the work. Thompson said that this would have to be submitted to OSF with required design documents. After some discussion, the following phasing plan was agreed upon.

- **Phase 1** – Summer 2011: All work at Area 1 and new Firewall to include classrooms and toilets adjacent to the wall. Work to renovate the existing Kitchen will also start, but will not complete by the start of the 2011-2012 school year. BCSD1 personnel said that the District will make necessary adjustments to prepare bag lunches while the kitchen is unavailable.
- **Phase 2** – Fall 2011: Start Front Office Additions and Renovations after installation of a separator wall. It was agreed that front office and Guidance personnel could be relocated to the current Wrestling Room area while this work is underway.
- **Phase 3** – Summer 2012: Complete Admin area and start work at the interior Core of the existing building to include classrooms and toilets.
- **Phase 4** – Summer 2012: All site work upgrades are proposed to start after the completion of all other work items.

Schwarting requested that Locker Room upgrades at the Gym be considered for the project even if included for Alternate pricing. She further noted that automatic flush valves be indicated at new toilet fixtures along with the improving poor drainage at the front of the school near the Kitchen. Thompson responded that the drainage concern will be addressed with the addition of pull-off parking proposed in this area. While Heichelbech restated that site activities will be held until the end of the project, Thompson said that fire hydrants and required utility work should be done at the start of all work this summer. Lee confirmed that the Town’s Board of Public Works has requested that three (3) hydrants along with a fire line loop around the building. Kearse also noted that SCDOT has indicated that Red Raider Drive in front of the high school is scheduled to be paved this summer. He stated that a “Mr. Cryder” will be the contact to coordinate this work with planned construction activities at the school.

With regard to scheduling for Data Cabling work, Albertson gave the following deadlines:

- Bidding work will be done through the State Department
- Electrical drawings are needed ASAP as a vendor must be selected by March 24, 2011
- The State will allow a “mini-bid” to allow a 3-4 week bid period
- Data drawings will be needed by February 24, 2011
- PA will not be included in E-Rate procurements
- Security Cameras will be relocated and reinstalled to accommodate the work
POST MEETING NOTE: After the meeting, Thompson met with Maxwell to review the High School plan in detail and to finalize the floor plan and space layouts.

**Bamberg-Ehrhardt Middle School Additions and Renovations**

Thompson informed the group that he had formally submitted the MS Schematic Design to OSF. He noted that he would follow up with OSF to submit a required portable location plan within the next two (2) weeks. In addition, the previously discussed early site / electrical relocation plan was completed for review. He acknowledged that Albertson’s IT comments will have to be incorporated into the plan.

Collier confirmed that the District’s asbestos consultant will not be able to conduct needed survey work. At the suggestion of Turner, he agreed to contact Mr. Ronny Lowder to see if his firm could do this required work. POST MEETING NOTE: Collier subsequently contacted Lowder and obtained acceptable pricing for the work. BCSD1 will now forward a Purchase Order to this vendor who has been directed to proceed with this work.

With plan details finalized for this project, Gunter was allowed to present the latest cost estimate (as attached) for the building which he distributed to the group. He confirmed that prior pricing was revised per earlier discussions. He also said that MEP costs were also edited after getting further information from engineers. Gunter clarified that a previously discussed shed and re-roofing of the existing gym were not included in costs. When questioned by Kearse, the contractor confirmed that an existing storage shed at the rear of the site would remain on campus. Gunter completed his overview of the cost estimate by noting the final cost of the Middle School to be estimated at $3.3M and $500K less than the previous estimate of $3.8M.

Thompson noted that the total cost estimate for both projects was approximately $10.7M (including contingency) which he stated was commendable considering each project was at the Schematic Design stage. Turner agreed and said that the designs should move forward without further scope changes. Gunter agreed and said that figures could improve after more detailed documents are prepared. He reiterated that code related improvements make up the majority of the costs.

Heichelbech presented a plan outlining the re-feed of electrical power to the existing building that must be done prior to the demolition of the Allen Building. He noted that the plan had been coordinated with Town of Bamberg officials and includes the installation of new electrical switchgear at the exterior wall of the existing classroom wing. It was then agreed that a wing wall may have to be added to conceal the switch gear from view from the street. Collier reminded the contractor to document all discussions held with Town officials.

During further discussions regarding the building, the following decisions were reached.

- Phillips said that due to low structure in the building, lay-in ceilings could be omitted. He said that ceilings located in the existing building are very low.
- Thompson agreed with Collier’s statement that space(s) may have to be added for electrical rooms
Albertson located the Data Closet and Phone Board locations for Thompson and said that these should be relocated this summer so they can be available for use for the start of next school year.

Thompson agreed to locate a space to relocate the Data Closet

Maxwell suggested that a hardware allowance be considered for each renovation project.

Albertson said that a space is needed to locate IT equipment in the Music/Art building

Similar to the High School project, discussions commenced related to project schedule and phasing of the work. The following phasing plan was agreed upon for the Middle School job.

- **Phase 1 – Spring Break 2011**: Install Portables on site to accommodate the relocation of 6th Grade students. After student relocations, complete electrical power relocation prior to abatement of the Allen Building in preparation for its demolition.
- **Phase 2 – Summer 2011**: Start work at the new classroom addition and new Firewall to include Nurses Office and Toilets adjacent to the firewall. Work will also begin to renovate the Band and Music Room building.
- **Phase 3 – Fall 2011**: Complete new classroom addition and start Administrative Addition. During this time, administrative offices will relocate to portables on campus.
- **Phase 4 – Spring 2012**: Complete all work to include the Admin area, new front facade, Roofing, and Kitchen area work. Alternates to complete work to re-roof the Gym and possible Patio cover would be undertaken during this time.

The group discussed Phase 1 work in detail as Thompson noted that drawings for this work would go to OSF during the next week to 10 days. He noted that engineers had designed this portion of the work by specifying items without long delivery times. Additionally, Town officials had agreed to secure a needed pad mounted transformer in order to meet the schedule. Heichelbech said that in order to maintain the proposed Spring Break start schedule, he would have to advertise the project for bids within the next two (2) weeks. He estimated a $200K cost for this work. After some discussion, the following Bid Phase schedule for the Middle School Phase 1 Package was agreed upon.

- **February 11, 2011**: AAG to complete plans for use by Thompson-Turner
- **February 14, 2011**: Advertise project for Bids in local papers
- **February 16, 2011**: 3:30PM Mandatory Pre-Bid held at the Middle School
- **February 24, 2011**: Accept Bids from Interested Bidders

With regard to completing design documents, Thompson said that AAG would complete Design Development (DD) drawings with in two weeks with Final plans being completed by the end of February.

The group agreed that interest meetings for local contractors will be held at a later date.
END OF MEETING

NEXT MEETINGS

OWNERS PROGRESS MEETING
FEBRUARY 16, 2011 AT 2:00PM
BAMBERG COUNTY SCHOOL DISTRICT OFFICES
(Note: New time for this meeting.)

BAMBERG-EHRHARDT MIDDLE PHASE-1 PRE-BID MEETING
FEBRUARY 16, 2011 AT 3:30PM
BAMBERG-EHRHARDT MIDDLE SCHOOL

The meeting was concluded at approximately 12:00 P.M. The contents of the meeting minutes noted above are the writers interpretation of the primary discussions held during the course of the meeting. Should the information listed herein be misleading or inaccurate in any way, please notify the writer within seven (7) days after receipt.

AAG Architects and Thompson-Turner Construction will be responsible for the distribution of these meeting minutes to the appropriate consultants as deemed necessary.
02/02/2011

Mr. Ben Thompson, AIA  
AAG Associates  
37 Marshellen Drive  
Beaufort, SC 29902

REF: Bamberg Ehrhardt High School Additions and Renovations  
Bamberg, South Carolina

Mr. Thompson:

Thank you for allowing Thompson Turner Construction to provide a revised budget estimate for your use. Per your request, we are pleased to provide the following estimate for the additions and renovations to Bamberg Ehrhardt High School Bamberg, SC. We have included the following in this estimate:

- Demolition including site, selective building, and interior as required  
- Site Development including landscaping, sidewalks utilities, & paving, etc...  
- New facade at building front as well as new windows as shown  
- Demolition and construction related to the new fire wall  
- Demolition and construction related to Area 1 as shown in AAG’s Scheme Three  
- Demolition and construction related to Area 2 as shown in AAG’s Scheme Three  
- Demolition and construction related to Area 3 as shown in AAG’s Scheme Three  
- Budget for HVAC & Controls per AAG’s Scheme 3  
- Budget for electrical upgrades per AAG’s Scheme 3  
- Extensive plumbing work related to renovated areas per AAG’s Scheme 3  
- Budget for new Fire Sprinklers per AAG’s Scheme 3

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100 North Main Street  
Sumter, SC 29150  
803 773-8005  
800 849-8040  
FAX: 803 938-8619  
www.ThompsonTurner.com
Qualifications & Clarifications to the Scope of Work

- Builders Risk insurance by others
- Permanent power provided by owner
- Business license fees are included
- Building permit is by others
- Tap fees are excluded
- Division 1 and Division 17 testing is excluded
- A performance and payment bond is included in the price above
- LEED certification is excluded
- Our price includes a 5% contingency allowance
- This budget is based on schematic plans dated 11/11/2010 and a project narrative provided by AAG Associates
- Specifications were not available while this budget was prepared
- Above budget estimate is based on AAG’s Scheme 3 which leaves the food service area at the front of the school & the media center at the rear
- Scheme 3 reduces the amount of new construction in area 2
- Scheme 3 deletes the new work at the media center
- Scheme 3 & AAG’s meeting with OSF deletes the requirement for the firewall at the right of Area 2
- Scheme 3 & AAG’s meeting with OSF deleted all the work at Area 3 except minor demolition, ceiling work & controls
- The allowance for the book detection system was deleted per the owner’s direction
- The allowance for the new stage flooring was deleted per the owner’s direction
- The allowance for the skylight was deleted & will be bid as an alternate
- Reduced the scope of the new ceiling work in Area 2 (deleted the new ceilings in the existing classrooms that presently do not have ceilings)
- Reduced the scope of new flooring to match the scope of new ceilings
- Reduced the scope of visual display boards to match the new Scheme 3 layout
- Deleted the folding partition from the scope of work as it is not shown in the new Scheme 3 layout
- Reduced the storage shelving allowance to accommodate the new Scheme 3 layout
- Reduced the food service equipment allowance to accommodate the reuse of some existing equipment
- Reduced the casework allowance to match the new Scheme 3 layout
- Deleted the library casework allowance, will reuse existing due to not relocating the media center in Scheme 3
- Revised the sprinkler, plumbing, HVAC, & electrical budgets to accommodate the scopes of work as agreed to during conversations between AAG, Owens & Associates & Thompson Turner Construction Co. during the week of 01/24/2011

Thank you again for contacting us about this project. We look forward to working with you.
Sincerely,

[Signature]

Marion L. Gunter
Thompson Turner Construction
02/02/2011

Mr. Ben Thompson, AIA
Altman Architectural Group
37 Marshellen Drive
Beaufort, SC 29902

REF: Bamberg Ehrhardt Middle School Additions and Renovations
Bamberg, South Carolina

Mr. Thompson:

Thank you for allowing Thompson Turner Construction to provide a revised budget estimate for your use. Per your request, we are pleased to provide the following estimate for the additions and renovations to Bamberg Ehrhardt Middle School Bamberg, SC. We have included the following in this estimate:

- Demolition including site, building, and interior
- Site Development including utilities, paving, canopies, etc...
- Chorus/Band Room renovation including new roof and extensive interior work
- Addition of new classrooms, administration area renovation, general renovations throughout entire school with the exception of the Commons, Media, and Science areas
- New facade at building front as well as new windows throughout school
- Demolition and construction related to the new fire wall
- Demolition and construction related to new kitchen equipment
- Budgets for HVAC upgrade and new controls
- Budget for electrical upgrade
- Extensive plumbing work related to renovated areas
- Roofing budgets @ the gymnasium

General Conditions.......................................................... $370,869
Civil (all demo included here)........................................... $394,286
Chorus/Band Rooms ......................................................... $153,100
Classrooms (includes admin. area)................................. $1,031,392
Facade (includes new front and all new windows) ............... $179,023
Fire Wall................................................................. $50,338
Kitchen Equipment....................................................... $166,972
HVAC & Controls.......................................................... $301,885
Electrical................................................................. $377,356
Plumbing ........................................................................ $113,207
Gymnasium ................................................................. $47,620
Total Construction Cost .................................................. $3,186,048
Contractor Controlled Contingency................................. $139,220

Grand Total................................................................. $3,325,269

Qualifications & Clarifications to the Scope of Work
  • Builders Risk insurance by others
  • Permanent power provided by owner
  • Business license fees are included
  • Building permit is by others
  • Tap fees are excluded
  • Division 1 and Division 17 testing is excluded
  • A performance and payment bond is included in the price above
  • LEED certification is excluded
  • Our price includes a 5% contingency allowance
  • This budget is based on schematic plans dated 11/01/2010 and a project narrative provided by AAG Associates
  • Specifications were not available while this budget was prepared
  • Revised the scope of work & estimate to reflect the areas we are not performing work in as it relates to acoustical ceilings, flooring etc…
  • Revised the scope of work & estimate to reflect the actual quantity of canopies that is included in the base bid
  • Revised the allowance included the estimate for the kitchen equipment. The new budget utilizes reuse of some existing equipment
  • Deleted furnishings allowances for display casework, floor mats & frames, & blinds
  • Revised the plumbing, HVAC & electrical budgets to accommodate the scopes of work as agreed to during conversations between AAG, Owens & Associates & Thompson Turner Construction Co. during the week of 01/24/2011

Thank you again for contacting us about this project. We look forward to working with you.

Sincerely,

[Signature]

Marion L. Gunter
ThompsonTurner Construction Co., Inc.
BAMBERG COUNTY SCHOOL DISTRICT ONE
RENOVATION PROJECTS
PROJECT MEETING MINUTES
February 16, 2011 – 2:00 P.M.

Those in Attendance:
Mr. Ben Thompson AAG Architects
Mr. Shane Lather AAG Architects
Mr. Hal Turner Thompson-Turner Construction
Mr. Tim Heichelbech Thompson-Turner Construction
Mr. Jay Lee Thompson-Turner Construction
Mr. Todd McElveen Thompson-Turner Construction
Mr. Marion Gunter Thompson-Turner Construction
Ms. Phyllis Schwarting Bamberg County School District One
Mr. Robbie Kearse Bamberg County School District One
Mr. Troy Phillips Bamberg – Ehrhardt Middle School
Mr. Ricky Albertson Bamberg County School District One
Mr. Dale Collier Brownstone Construction Group

Copies
Mr. Randy Maxwell Bamberg – Ehrhardt High School
Mr. Skipper Smith Richard Carroll Elementary School
Mr. Keith Powell Childs and Halligan

Bamberg-Ehrhardt Middle School Additions and Renovations

Collier opened the meeting with discussion related to the Middle School. When questioned by Phillips, Heichelbech confirmed that the addition of new classrooms will be scheduled to open by the start of school in August 2011. Phillips said that either the new classrooms or renovations to the existing annex building must be completed by this time. Lee reminded the group that portable classrooms will be put in place on the campus to accommodate affected classrooms in case the work is not completed.

Collier noted that Albertson had completed data plan coordination for the new elementary school and asked for a similar update on the renovation projects. Albertson noted that the existing Technology Closet (MDF) was located in an area to be renovated and asked that it be relocated so all cabling can be re-pulled during the upcoming summer. He said that due to this relocation, all cabling will have to be reworked to include the installation of new conduit in existing spaces that are not being renovated in the building. Albertson said that similar to the new elementary school, classroom conduit should include a central 12x12 junction box to capture all classroom cabling conduit. A 2” conduit should then be extended from the J-box to the corridor cable tray.
Thompson said that he and the electrical engineer would consult via phone with Albertson to insure that required conduit is put in place for separate cabling bids to be coordinated by the Owner through State Procurement. Albertson set the following parameters for his discussions with the designers.

- E-Rate Plans must be completed by February 24, 2011 in order to have bids for the work on place by March 24, 2011.
- Plans should include layouts for all computer data locations
- Plans should include layouts for all telephone jack locations
- Classroom telephones should be located near each teacher’s desk
- No new work is needed in the newer Media Center building areas
- Work must include conduit to connect the Main Building to the Music/Art Annex

Thompson updated the group by noting that he had received verbal comments from Mr. Bob Cook of OSF for both the Phase 1 (Electrical Relocation, Allen Building Demolition and Portables) and Phase 2 (Renovation and New Addition Work) portions of the planned work. He described the comments as general in nature and typical of standard comments that are received from the agency. Thompson said that OSF gave approval for the Middle School design to the Design Development stage and further noted that DD drawings would be forwarded to OSF by the end of the current week.

Heichelbech presented a proposed schedule for review by the group. Thompson acknowledged that he had coordinated with Heichelbech to come up with indicated target dates and described it as very aggressive. During the discussion, several dates and locations for meetings were confirmed. POST MEETING NOTE: Heichelbech has modified the schedule and distributed the attached document per meeting discussions.

Heichelbech stated that Design Development Plan cost estimates will be developed with input from major subcontractors. Turner suggested that early procurement of components such as HVAC equipment and hollow metal door frames be considered as these items will be needed as soon as possible for summer work.

Lee also noted that the start of sprinkler system work at B-E High School will have to start this summer. Collier and Lather said that a necessary approval letter from the SC Labor and Licensing Review Board (SCLLR) will have to be secured after approved shop drawings are provided to the agency for review. Heichelbech said that an early subcontract for this work would have to be pursued in order to meet needed deadlines. He stated that pricing for this work would have to be obtained after final plans are completed in mid-March. At that time, pricing may also be secured for other long-lead items such as door frames.

Lather said that portables to be installed will have to be inspected by OSF prior to their use. Lee responded that portables will be in place for inspection by the first week of April, approximately two (2) weeks prior to the demolition of the Allen Building. Schwarting reminded the group to preserve two (2) cornerstones to be salvaged from the building.

Collier said that an RFP for IBC Chapter 1 and 17 Inspections would be advertised for pricing by the end of the month.
Heichelbech updated the group with regard to asbestos survey work at the Allen Building. He confirmed that Mr. Ronny Lowder of Emerald, Incorporated had completed work to determine the extent of asbestos remaining in the building. He noted that Lowder’s investigative work revealed that there were no asbestos materials in the building and said that the surveyor was prepared to submit a required letter for DHEC submission to allow demolition of the building to proceed. Kearse doubted these findings and suggested that on-site asbestos books be reviewed in comparison with Lowder’s reporting. During the meeting, Phillips presented recent record books detailing where asbestos containing materials have been identified on campus. Heichelbech was allowed to take books pertaining to the Allen Building to allow Lowder to revise and/or confirm the findings of his initial report. After this review, Lowder will prepare and release his final report.

POST MEETING NOTE: After the meeting, Thompson-Turner representatives conducted a Pre-Bid Meeting for Phase 1 work related to the Middle School. Interested contractors were given an overview of the scope of the work to relocate electrical to the school and demolish the Allen Building. Additionally, all in attendance were given a tour of the school and allowed to ask questions related to the proposed work. Bids for this work will be received in Thompson-Turner’s Sumter offices at 2PM on February 24.

**Bamberg-Ehrhardt High School Additions and Renovations**
As the meeting was focused on the Middle School, only minimal discussions were held related to the High School. Thompson presented a revised interior layout of the school to reflect prior meetings held with the principal, Mr. Randy Maxwell.

Lee noted that the entire roof of the existing building was suspect and in need of replacement. Thompson confirmed that engineering drawings will note the replacement of all HVAC systems which will affect roofing work at roof mounted equipment. Lee also stated that existing roof expansion joints will have to be modified as they do not extend completely through the roof membrane.

Thompson noted that several walls in the existing building have now been indicated as firewalls per code requirements dictating that Storage Rooms larger than 100SF be surrounded by rated walls.

Albertson reminded the designers to complete electrical drawings for data and phone locations similar to plans requested for the Middle School.

**Post Meeting Note:**
Gunter presented the latest cost estimates for both projects to Collier for distribution with these meeting minutes. He noted that he had met with Cumming|SMG estimator, Jeremy Holt to compare their independent pricing. Per the attached documents, estimates of the Cumming|SMG–Brownstone and Thompson Turner Construction are compared by project division categories. It is noted that the total project budget is slightly exceeded, however, the total overall cost estimates prepared by both parties are only approximately $50K apart on over $10M of work.
END OF MEETING

NEXT MEETINGS

BAMBERG-EHRHARDT MIDDLE SCHOOL
PHASE I – ELECTRICAL RELOCATION AND ALLEN BUILDING DEMOLITION
BID OPENING
FEBRUARY 24, 2011 AT 2:00PM
THOMPSON-TURNER CONSTRUCTION SUMTER, SC OFFICES

OWNERS PROGRESS MEETING
MARCH 2, 2011 AT 10:00AM
BAMBERG COUNTY SCHOOL DISTRICT OFFICES

The meeting was concluded at approximately 3:30 P.M. The contents of the meeting minutes noted above are the writer's interpretation of the primary discussions held during the course of the meeting. Should the information listed herein be misleading or inaccurate in any way, please notify the writer within seven (7) days after receipt.

AAG Architects and Thompson-Turner Construction will be responsible for the distribution of these meeting minutes to the appropriate consultants as deemed necessary.
Bamberg Ehrhardt Middle School
Bamberg Ehrhardt High School

Preconstruction Phase Schedule Dates

2/17/11 (revised during meeting)

2/18/11 – AAG submits DD documents to OSF for review
2/18/11 – AAG issues TTC the DD documents for DD pricing
3/2/11 – DD estimate review meeting
3/11/11 – AAG receives CD documents from design consultants
3/14/11 – AAG submits final CD documents to OSF for review
3/14/11 - AAG issues TTC the final CD documents for final GMP bidding/pricing
3/14/11 – TTC solicits pricing from schedule critical subs (fire protection & door/frame/hdw.)
3/16/11 – TTC/Reynolds combined local/MBE/WBE subcontractor/supplier open house
  (location: High School Commons Area, time 6:00 PM)
3/28/11 – TTC makes final CD drawings available to subs/supplier for bidding
3/31/11 – Pre-bid Meeting (location: Middle School Cafeteria, time 2:00 PM)
4/4/11 – TTC/AAG issues addendum
4/13/11 – Bid date for subs/suppliers (location at TTC Sumter office, time 2:00 PM)
4/21/11 – TTC meeting with Bamberg/Brownstone to review final GMP estimate
  (location: Thompson Turner field office at the Middle School, time 1:00 PM)
4/21/11 – TTC receives notice to proceed to release subs
4/21/11 - 5/27/11 – TTC/AAG concurrent submittal review & TTC material procurement
05/27/11 – Last day of school
05/28/11 – Start construction for summer phase
02/16/2011

Mr. Dale Collier
Brownstone Construction Group
1213 Lady Street
Columbia, SC 29201

REF: Bamberg Ehrhardt High School Additions and Renovations
    Bamberg Ehrhardt Middle School Additions and Renovations
    Bamberg, S.C.
    Schematic Estimate Comparisons

Mr. Collier:

Thank you for allowing Thompson Turner Construction to provide a Comparison Report budget review for your use. As a follow up to our conversation on 02/15/2011, TTC has included comparison reports for both projects as referenced above. At the middle school the comparisons show that our estimates differ by approximately $200,000. This is attributed to TTC having included monies for the mobile classrooms & a greater mechanical scope of work. For the high school we have included 3 estimates for comparison. Brownstone’s estimate was for scheme 1 so we have included our scheme 1 for comparison as well as our scheme 3 estimate for reference. Comparing The Brownstone scheme 1 to TTC’s scheme 1 they vary by approximately $150,000. This variance is attributable to the minor difference in interpretation of AAG’s written scope of work. However if you look at the overall difference in our estimates for the two projects it is approximately $50,000. This equates to less than 1% of the total.

Thank you again for contacting us about this project & should require additional information it will be provided as necessary.

Sincerely,

Marion L. Gunter
Thompson Turner Construction
## Comparison Report

### Bamberg MS SD Est 12.20

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<th>Item</th>
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Cumming SMG estimate of original design scheme

Thompson-Turner cost estimates

Original Scheme

Most Recent Scheme/Option "S"
Bamberg-Ehrhardt Middle School Additions and Renovations

Collier opened the meeting and noted that BCSD1 Special Education Director, Ms. Dottie Brown, was in attendance to review plans and provide direction with regard to Special Education requirements. Brown’s review led to the following plan adjustments.

B-E Middle School:

- Brown questioned if the new Special Ed Classroom will have Life Skills equipment? Phillips noted that students will still have access to the existing Life Skills Kitchen located in the Gym Area.
- Thompson confirmed the following when questioned by Brown
  - All building spaces meet ADA requirements and doorways will accommodate motorized wheel chairs.
  - Two (2) Resource Classrooms are provided
  - Resource Classrooms have immediate access to Toilets
  - Nurse’s Clinic is located near Resource space for quick access.
  - Per Lather’s suggestion, space for a full size refrigerator will be incorporated into this space so ice can be available.
As at the High School, Cook said that existing fire alarm and security systems at the Middle School are adequate and should be reused. He agreed to mark up a floor plan provided by the architect, but also said that he would need to be allowed to remove equipment to be reused prior to renovation activities. Cook said that he would also need access to the Allen Building to remove items prior to its demolition. Heichelbech said that Cook should begin removing items from the Allen Building in mid-April.

Schwarting confirmed that Cook’s firm should be utilized as the District’s proprietary vendor for data, security and fire alarm systems for all building program projects since they current maintain these systems district-wide for the Owner. It was agreed; however, that Cook’s firm will work as a subcontractor to the Electrical Contractor during the completion of the work. Cook was informed that cabling work at each renovation project would be starting later in the summer after conduit and cable tray infrastructure is installed at each building.

During other discussion, it was agreed that the door frame at the school’s front door should be prepped to receive future access control devices.

When questioned by McElveen, Thompson confirmed that the existing free-standing Storage Building on campus will NOT be demolished. McElveen then provide his review comments related to the recently completed DD plans to the architect for his use. POST MEETING NOTE: Collier has since provided DD Review Comments for the designer’s use.

Heichelbech reported that Asbestos Reports received from the Owner were reviewed by the independent asbestos surveyor who confirmed that NO Asbestos would need to be abated in the Allen Building prior to its demolition. He said that the formal letter from the surveyor would be needed by April 8, 2011; ten (10) days prior to the start of demolition activities.

Lee said that classroom portables would be delivered to the Middle School with set-up starting during the following week. He agreed to coordinate with the Principal to begin the move out of existing staff persons from the Allen Building into these units. When questioned by Collier, Phillips confirmed that planned work at the Middle School will not affect Summer School as these classes could be held entirely in the new portables to be brought to campus.

Albertson said that a Mr. Frank Hutto of Orangeburg will remove the ETV Tower and satellite dish at the school within the week. He agreed to have similar work done at the High School to remove these items.

Heichelbech reported that bids were received for Phase 1 work at the Middle School (Electrical Relocations and Demolition of the Allen Building) with local vendor Rhoad’s Excavating recommended for the demolition work at a cost of approximately $33K and FM Young Electrical for Fairfax, SC recommended as the low bid for the electrical renovations at approximately $200K. He noted that both bids were within targeted budgets for this work. Turner noted that FM Young was a very capable electrician that had done work with Thompson – Turner in the past.
Heichelbech estimated that another $5K would have to be added to the work to incorporate the Owner’s fire alarm vendor into the contract. Collier then gave the contractor approval to proceed with securing the noted companies under contract.

Lather reminded the contractor of Buy America and Davis Bacon Act requirements of the contract. He also noted that items with long delivery dates need to be secured immediately.

As the meeting ended, Gunter presented the attached DD cost estimate for review and future discussion by the group. He noted costs to be very close to the initial Schematic Cost Estimate he previously prepared. Gunter noted that several items had moved in different directions in the estimate, but the overall cost was essentially the same. It was agreed that Kitchen equipment can remain for the most part in the school building.

**Bamberg-Ehrhardt High School Additions and Renovations**
The group conducted a similar Special Education Program review with Brown for the High School with the following comments and concerns being noted.

B-E High School:
- Nurse’s Clinic space provided with similar accessories as Middle School
- Existing Special Ed Classrooms to remain with doors added between each space to meet egress requirements
- Group Toilets to be renovated to insure that they meet ADA requirements
- Brown stated that a Toilet needs to be added at the existing Self-Contained Classroom to remain. Designers then agreed to convert a classroom adjacent to Group Toilets at the firewall into this space as plumbing would be nearby.

When questioned by Kearse, Thompson confirmed that Brown will have to relocate from her existing High School office due to renovation work at the fire wall. Brown said that she would move to another school building as she would need computer access during the summer months. Albertson agreed to assist Brown with her computer needs for the summer. Lather noted that Special Ed files will also have to be relocated while the High School is being renovated. Lee said that a suitable storage container could be used to house these materials and allow staff access during the summer. Thompson confirmed that adequate storage is provided for this program in the renovated plan.

Schwarting and Kearse accepted that classrooms of less that 800SF at new classrooms to be converted near the new firewall in the school. Lather said that OSF may ask for written acknowledgement of these conditions from the School District during their review.

With regard to Orangeburg Security provided systems, Cook and Albertson agreed that BCSD1 was pleased with the current camera system in place at the High School. Lather then agreed to provide a new floor plan to Cook for him to mark up with locations where existing cameras are positioned in the building. Albertson said that Cook will need time prior to the start of demolition activities at the 3-hour wall to remove equipment that will be reinstalled after renovations are completed.
Lather and Thompson reminded the vendor that only two (2) sets of hold-open type control doors will remain in the building after renovations. In that regard, some of the removed equipment could be salvaged for reuse in other facilities or used for replacement parts. When questioned by Collier, Schwarting said that access control card readers will not be used at the renovated schools initially; however, new exterior door frames at main entry areas should be prepped to accommodate future card readers.

Thompson noted that recent reviews by Mark Faulk of SCDOT had increased the scope of this work. He said that SCDOT has stated that all work in the right-of-way must be per SCDOT standards and resulted in additional work at the Kitchen drop off lane that was previously discussed. He clarified that if no work was done in the right-of-way area, SCDOT would not enforce any other requirements. In light of this, Collier directed that all SCDOT work for this project be identified as an Alternate.

Thompson confirmed that High School Design Development Plans would be sent to OSF, the Owner and Collier by the end of the week. He acknowledged that final High School CD plans will not be completed simultaneously with the Middle School plans as initially anticipated.

As the meeting adjourned, the group agreed to reconvene during the following week to discuss the High School plan and cost estimate in more detail.

NEXT MEETING(S)

OWNERS PROGRESS MEETING – B-E HIGH SCHOOL REVIEW
MARCH 9, 2011 AT 2:00PM
BAMBERG COUNTY SCHOOL DISTRICT OFFICES

OWNERS PROGRESS MEETING
MARCH 16, 2011 AT 10:00AM
BAMBERG COUNTY SCHOOL DISTRICT OFFICES

LOCAL CONTRACTORS (LSWMBE) INTEREST MEETING
MARCH 16, 2011 AT 6:00PM
BAMBERG-EHRHARĐT HIGH SCHOOL CAFETERIA COMMONS AREA

The meeting was concluded at approximately 3:30 P.M. The contents of the meeting minutes noted above are the writer’s interpretation of the primary discussions held during the course of the meeting. Should the information listed herein be misleading or inaccurate in any way, please notify the writer within seven (7) days after receipt.

* AAG Architects and Thompson-Turner Construction will be responsible for the distribution of these meeting minutes to the appropriate consultants as necessary. *
03/03/2011

Mr. Ben Thompson, AIA
Altman Architectural Group
37 Marshellen Drive
Beaufort, SC 29902

REF: Bamberg Ehrhardt Middle School Additions and Renovations
Bamberg, South Carolina

Mr. Thompson:

Thank you for allowing Thompson Turner Construction to provide a design development estimate for your use. Per your request, we are pleased to provide the following estimate for the additions and renovations to Bamberg Ehrhardt Middle School Bamberg, SC. We have included the following in this estimate:

- Demolition including site, building, and interior
- Site Development including utilities, paving, canopies, etc...
- Chorus/Band Room renovation including new roof and extensive interior work
- Addition of new classrooms, administration area renovation, general renovations throughout entire school with the exception of the Commons, Media, and Science areas
- New facade at building front as well as new windows throughout school
- Demolition and construction related to the new fire wall
- Demolition and construction related to new kitchen equipment
- Budgets for HVAC upgrade and new controls
- Budget for electrical upgrade
- Extensive plumbing work related to renovated areas
- Roofing budgets @ the gymnasium

Total Construction Cost ................................................................. $3,186,011
Contractor Controlled Contingency ........................................... $139,814

Grand Total................................................................. $3,325,825

Qualifications & Clarifications to the Scope of Work
- Builders Risk insurance by others
- Permanent power provided by owner
- Business license fees are included
- Building permit is by others
• Tap fees are excluded
• Division 1 and Division 17 testing is excluded
• A performance and payment bond is included in the price above
• LEED certification is excluded
• Our price includes a 5% contingency allowance
• This budget is based on design development plans dated 02/18/2011
• Specifications were not available while this budget was prepared

Thank you again for contacting us about this project. We look forward to working with you.

Sincerely,

[Signature]
Marion L. Gunter
ThompsonTurner Construction Co., Inc.
## GENERAL CONDITIONS

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BAMBERG COUNTY SCHOOL DISTRICT ONE
RENOVATION PROJECTS
PROJECT MEETING MINUTES
March 30, 2011 – 10:00 A.M.

Those in Attendance:
Mr. Ben Thompson   AAG Architects
Mr. Tim Heichelbech  Thompson-Turner Construction
Mr. Todd McElveen  Thompson-Turner Construction
Mr. Marion Gunter  Thompson-Turner Construction
Mr. Jay Lee  Thompson-Turner Construction
Ms. Phyllis Schwarting  Bamberg County School District One
Mr. Robbie Kearse  Bamberg County School District One
Mr. Ricky Albertson  Bamberg County School District One
Mr. Dale Collier  Brownstone Construction Group

Copies
Mr. Troy Phillips  Bamberg – Ehrhardt Middle School
Mr. Randy Maxwell  Bamberg – Ehrhardt High School
Mr. Skipper Smith  Richard Carroll Elementary School
Mr. Shane Lather  AAG Architects
Mr. Hal Turner  Thompson-Turner Construction
Mr. Keith Powell  Childs and Halligan

Bamberg-Ehrhardt Middle School Renovation Project
Collier then opened the meeting by noting that he had provided a construction update to the BSD1 School Board earlier in the week to give them an overview of ongoing activities in the Building Program. In addition, he noted that he had provided a calendar to indicate upcoming dates for various meetings and bid openings. He said that move-out of the B-EMS Allen Building is indicated to occur within the next week. Lee confirmed that the Allen Building move-out was already in process with non-essential items being relocated. He stated that the full move-out of the building would occur on the weekend of April 9, 2011 after a scheduled OSF Occupancy Inspection of installed portables at the school on April 7, 2011.

When questioned by Collier, Lee acknowledged that coordination was being made with the School Staff to salvage items to be retained by the District prior to the demolition of the Allen Building. He noted the following with regard to progress:

- Allen Building cornerstones (2) will be removed and turned over to the Owner.
  Lee agreed to house the items in the on site job trailer upon removal
- When questioned by Albertson, Heichelbech said that Fire Alarm equipment in the building could be removed during the week of April 11, 2011.
- Terry Cook of Media Security Services will provide fire extinguishers for portables
- T-T will saw-cut the Allen Building to separate it from the main school building and install a temporary wall on the following week in preparation for its demolition.
- Heichelbech said that T-T had not received the needed Asbestos Letter from the asbestos surveyor, Emerald, Inc. He noted that this is required so it can be sent to DHEC prior to receiving a 10-day notice from the agency.
- GS2 Engineering has assisted in preparing portables for the OSF Occupancy Inspection by completing needed inspections. Lee noted that ceilings in some of the units had to be modified to meet new seismic requirements.
- Thompson confirmed that Bob Cook of OSF will conduct the portable inspections. He said that Shane Lather will attend the inspection for AAG.
- Lee stated that Terry Cook of Media Security Services was working well with the contractor to extend fire alarm and other systems to the new portable units.

POST MEETING NOTES: OSF has since inspected and approved the new portables for Occupancy and move-in. Additionally, the needed Asbestos Letter was received from Emerald, Incorporated and submitted to DHEC by Thompson-Turner.

Albertson confirmed that the ETV tower had been removed from the Middle School as previously discussed. He said that there were no ETV items to be removed at B-EHS.

Lee gave a general update of Phase 1 B-EMS work that includes electrical upgrades, portable installations and the Allen Building demolition. He said that interior electrical conduit is well underway in the building and reported that the new Main Panel (#3) is due to be delivered to the site during the following week. Coordination has also been made with Bamberg BPW to have the new transformer for the school in place by the end of next week. Power transfer from to energize the new transformer will be done after installation of the new transformer.

With Bids scheduled to be taken for B-EMS on April 13, 2011, Thompson said that Addendum #1 for this project would be completed and sent to T-T for distribution to interested bidders on the following week. Heichelbech reminded the group that the Pre-Bid Conference for the project would be held on the day after the meeting. Gunter, Lee and Heichelbech confirmed that there was a lot of subcontractor interest in the project. Gunter added that the AGC website had recorded over 200 “hits” recorded for the project. Thompson warned that OSF comments were incomplete to date and may have to be incorporated into the project after bids are received. Upon Lee’s request, Thompson agreed to review the fire penetration specification to insure that it was in compliance with OSF’s latest Construction Guide update.

**Bamberg-Ehrhardt High School Renovation Project**

Thompson reported that the civil engineer for the project had requested additional survey work to be done by Edisto Surveyors at the school. He said that after incorporating this data, the design would be delayed and would push the bid date for the High School back approximately one week. He said that new information was related to the storm drainage at the school and would require DHEC approvals when the design was completed. During the meeting, Thompson presented several paperwork items for signature by Schwarting for both the Middle and High School projects.
POST MEETING NOTE: Schwarting subsequently completed the presented documents with appropriate signatures and mailed them back to the architect by the end of the week. Required information has also since been provided by the surveyors.

Heichelbech said that similar to the Middle School, survey work was needed at the High School to allow bids to be taken in accordance with the agreed upon schedule. Collier and Schwarting agreed to contact Edisto Surveyors to see that needed work is completed as soon as possible.

In light of potential scheduling concerns, Thompson and Heichelbech agreed to conduct a separate meeting to come up with a “Plan B” for the High School if the bid date is further affected. Both indicated their concern that needed equipment may not be able to be ordered and received in time to complete planned summer work.

Thompson provided an update plan of the B-EHS Kitchen and Serving Lines as revised with input form Ms. Karen Threatt, BSD1 Food Service Director. He noted that the layout now included three (3) serving lines as requested by Threatt. Thompson acknowledged that the indicated hood in the kitchen will have to be moved to the center of the kitchen area. Collier and Albertson expressed concern that the indicated routing of student traffic through the serving line appeared congested and should be restudied. Lee and Collier questioned whether existing equipment was noted to be reused in the Kitchen area as discussed in prior meetings. Thompson agreed to review these issues with his Food Service Design Consultant.

With regard to the site, Thompson confirmed that trash dumpsters will be moved around the corner of the building so as to not be located along the frontage of the school building. Alexander said that low areas at the corner of the building should be addressed in the project in the area where buses are currently routed around the building from Red Raider Drive. Kearse added that a Mr. Tripp Stokes of SCDOT has asked that site upgrades be coordinated with his office as there are plans to pave this street this summer. Thompson suggested that this work should be held until the summer of 2012. Collier agreed and noted that concrete and other major project deliveries will be routed along Red Raider Drive for the duration of both projects well into next year.

McElveen reported that as previously discussed, bids for the B-EHS sprinkler system would be taken on April 5, 2011 at Thompson-Turner offices in Sumter. He said that approximately five (5) sprinkler companies had expressed interest in submitting bids for this work. Upon his request, Thompson agreed to forward Reflected Ceiling Plans to the contractor for his use in securing this pricing. Heichelbech said that after reviewing bids, he would make a formal recommendation to Collier for approval to have this work proceed.

POST MEETING NOTES: B-EHS Sprinkler Bids were received as noted on 4/5/11 as provided in the Table below. Thompson-Turner has evaluated submitted pricing and recommended that Automatic Fire Systems be approved to begin their required submittal process prior to allowing work to begin.
General Items
Kearse provided the attached recently approved 2011-2012 School District Calendar for use by the group.

During the meeting, the group confirmed additional meeting dates to be added to the April 2011 Calendar. Similarly, the design/construction team for the New Richard Carroll Elementary School finalized April dates as provided in the attached calendar for the month.

Gunter stated that he would be presenting one (1) more cost estimate for each project prior to issuing the GMP for the project.

Kearse informed the group that Steve Jenkins of OSF had visited the school sites to review work completed by the District as a result of receiving an Energy Grant prior to the onset of the building program. He said that OSF was concerned that the work was completed without their review. He stated that Jenkins will forward a letter to the District identifying any further required upgrades that will be addressed by the original contractor who completed this work. Collier noted that any general life safety upgrades noted by Jenkins beyond the Energy Grant work will be addressed in the upcoming building projects.

Collier noted that Proposals will also be received from Geotechnical Firms for Inspection and Testing Services for the new school on the day after the meeting. POST MEETING NOTE: The attached Bid Tabulation for the Inspection and Testing Services has since been prepared. After review proposals and thoroughly interviewing the low bidder, a recommendation has been made to utilize GME Engineering for this work. Negotiations will now be made to reach an agreement with GME to do similar work at each renovation project.

END OF MEETING

NEXT MEETING(S)
MARCH 31, 2011 AT 2:00PM
BAMBERG-EHRHARDT MIDDLE SCHOOL PRE-BID CONFERENCE
BAMBERG-EHRHARDT MIDDLE SCHOOL CAFETERIA
MARCH 31, 2011 AT 2:00PM
NEW ELEMENTARY SCHOOL SPECIAL INSPECTION PROPOSALS DUE
BROWNSTONE CONSTRUCTION GROUP OFFICES – COLUMBIA, SC

APRIL 7, 2011 AT 10:30PM
BAMBERG-EHRHARDT MIDDLE SCHOOL
OSF OCCUPANCY INSPECTION FOR PORTABLE CLASSROOMS
BAMBERG-EHRHARDT MIDDLE SCHOOL

APRIL 13, 2011 AT 2:00PM
BAMBERG-EHRHARDT MIDDLE SCHOOL BID OPENING
THOMPSON-TURNER CONSTRUCTION OFFICES
SUMTER, SC

APRIL 27, 2011 AT 10:00AM
BAMBERG-EHRHARD MIDDLE SCHOOL - WEEKLY PROJECT MEETINGS BEGIN
BAMBERG-EHRHARD MIDDLE SCHOOL JOBSITE TRAILER

The meeting was concluded at approximately 12:00 P.M. The contents of the meeting minutes noted above are the writers interpretation of the primary discussions held during the course of the meeting. Should the information listed herein be misleading or inaccurate in any way, please notify the writer within seven (7) days after receipt.

AAG Architects and Thompson-Turner Construction will be responsible for the distribution of these meeting minutes to the appropriate consultants as necessary.
Bamberg School District
All Hands Supporting Education

2011-2012

School Days
Aug. 8-12 Staff Development
Aug. 15 First Day for Students (Full Day)
Sept. 5 Labor Day Holiday
Sept. 26 Staff Development
Oct. 18 45th Day (End of 1st Quarter)
Oct. 18-20 HSAP Exam (Grades 11 & 12)
Nov. 23-25 Thanksgiving Holidays
Dec. 19-Dec 30 Winter Holidays
Jan. 2 School Resumes
Jan. 6 90th Day (End of 1st Sem)
Jan. 9-10 Staff Development
Jan. 16 Martin Luther King Holiday

Holidays
Aug. 11-12, Jan. 9, Feb. 21, May 28
July 1, 5, 6, 7, 8, 15, 22, 29

Teacher Furlough Days (Five Days)
Administration Furlough Days* (Ten Days)

*Two additional days to be approved by Superintendent

End of Quart/Sem
Feb. 20 Presidents’ Day Holiday
Feb 21 Staff Development (1st Make-Up)
March 16 135th Day (End of 3rd Quarter)
March 20-27 PASS Writing Test
April 2-6 Spring Break
April 17-19 HSAP Exam (Grades 10-12)
May 8-18 PASS ELA, Math, Sci, Soc. Studies
May 24-25 Final Exams (Early Dis. For Students)
May 25 Final School Day (End of 2nd Sem)
Graduation 7:00 PM
May 28 Staff Development (2nd Make-Up)

Approved: 03-28-11
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## BAMBERG COUNTY SCHOOL DISTRICT ONE
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<td>$5,080.00 $11,520.00 $210.00</td>
<td>$6,460.00 $49,366.00 $1,680.00</td>
<td>* <strong>87,921.00</strong></td>
</tr>
<tr>
<td>RPM / Mead Hunt</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>$1,000.00 $8,000.00 $1,000.00</td>
<td>$40,000.00 $70,000.00 $10,000.00</td>
<td><strong>$130,000.00</strong></td>
</tr>
<tr>
<td>S&amp;ME, Inc.</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>$0.00 $15,500.00 $2,800.00</td>
<td>$60,000.00 $130,000.00 $16,500.00</td>
<td><strong>$224,800.00</strong></td>
</tr>
<tr>
<td>Terracon</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>$0.00 $18,250.00 $1,500.00</td>
<td>$30,980.00 $57,200.00 $8,100.00</td>
<td><strong>$116,030.00</strong></td>
</tr>
</tbody>
</table>

* Total Includes Additional Costs for an On-Site Lab and Final Project Closeout
Those in Attendance:
Mr. Ben Thompson   AAG Architects
Mr. Shane Lather   AAG Architects
Mr. Hal Turner   Thompson-Turner Construction
Mr. Tim Heichelbech   Thompson-Turner Construction
Mr. Todd McElveen   Thompson-Turner Construction
Mr. Marion Gunter   Thompson-Turner Construction
Ms. Phyllis Schwarting   Bamberg School District One
Mr. Robbie Kearse   Bamberg School District One
Mr. Ricky Albertson   Bamberg School District One
Mr. Luther Thompson   Cumming | SMG
Mr. Dale Collier   Brownstone Construction Group

Copies
Mr. Jay Lee   Thompson-Turner Construction
Mr. Troy Phillips   Bamberg – Ehrhardt Middle School
Mr. Randy Maxwell   Bamberg – Ehrhardt High School
Mr. Skipper Smith   Richard Carroll Elementary School
Mr. Keith Powell   Childs and Halligan

Bamberg-Ehrhardt Middle School Renovation Project
Collier then opened the meeting by noting that bids had been received for the B-EMS project by Thompson Turner Construction. He then allowed the contractor to present results for the Owner’s consideration.

Turner started by stating that all bids received were within $40K of the overall targeted budget with the exception of Mechanical, Electrical and Plumbing (MEP) figures. He stated that roofing prices were initially over the contractor’s budget line item, however, additional bids for this work reduced the price for this scope by another $60K, leaving only the MEP numbers as a cause for concern. Turner said that MEP figures were approximately $500K over budget on bid day and prompted the contractor to pursue pricing from additional sub-contractors. He noted that the additional bids confirmed that initial pricing were in line with the actual price for the work. In response to this overage, representatives for both the contractor and architect met with the MEP designer in Charleston to review cost saving measures that could be taken. As a result of the meeting, Turner reported that $270K of the $500K overage had been recouped.

Turner then allowed Gunter to distribute the attached Bid Results Report to the Group. He noted that Base Bid Work for the project totaled approximately $3.2M with the
inclusion of $140K in contingency funds. Turner pointed out that this value was within the overall projected budget of $3.35M, but does not include work for Alternates indicated on the pricing sheet provided by the contractor. The group then discussed each of the items noted for Alternate pricing and reached the following agreements.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt. 1 – Band/Art Bldg.</td>
<td>$311,705.00</td>
<td>Hold until Bids are taken for B-EHS</td>
</tr>
<tr>
<td>Alt. 2 – Pre-Engr. Canopies</td>
<td>$67,500.00</td>
<td>Omit this work - Re-use existing canopies</td>
</tr>
<tr>
<td>Alt. 3 – Rear Parking Lot</td>
<td>$23,339.00</td>
<td>Omit this work – Parking lot not needed</td>
</tr>
<tr>
<td>DDC Controls – Monitored</td>
<td>$79,132.00</td>
<td>Omit this work and bid overall Controls</td>
</tr>
<tr>
<td>DDC Controls – Non-Monitored</td>
<td>$71,541.00</td>
<td>Package for entire District with RCES job</td>
</tr>
<tr>
<td>Gymnasium Roofing</td>
<td>$47,064.00</td>
<td>Hold until Bids are taken for B-EHS</td>
</tr>
<tr>
<td>Intercom System</td>
<td>$17,705.00</td>
<td>Incorporate into the B-EMS Contract</td>
</tr>
<tr>
<td>TPO Roofing Deduct</td>
<td>– $33,004.00</td>
<td>Hold until Bids are taken for B-EHS</td>
</tr>
</tbody>
</table>

With regard to the Alternates, the following discussion points were raised by the group.

- Kearse said that the existing Band/Art Building could be used for Music and Art programs without major changes. Lather said that if any work is done in this building, OSF will require major modifications due to its wood structure.
- It was agreed that after portables are removed, existing canopies can be reused and/or relocated to serve the Music/Art Building. Schwarting said that if existing canopies are to be re-used, they should be painted.
- Schwarting and Kearse confirmed that the Rear Parking Lot is not needed as there is ample parking available at the front of the school building.
- Turner noted that he and Collier had discussed HVAC Controls and stated that pricing included main servers and controls for a District-wide system. Collier said that HVAC Controls would be bid separately for the new Richard Carroll Elementary School project so a vendor can be selected for District-wide use after bidding on the new project that has a clear scope. Turner clarified that programmable thermostats would be provided in the Middle School. Collier further stated that conduit infrastructure should be included in the Middle and High School projects to allow a future Controls vendor to install this system.
- The group agreed to hold the Gym Roofing portion of the work. Gunter clarified that this work included the complete replacement of shingles and underlayment on the building.
- Collier directed that pricing for the Intercom System be incorporated into the contract. Albertson agreed and said that the current Middle School intercom system is obsolete. He said that designers were directed to provide a Valcom PA System.
- Turner suggested that a single-ply TPO Roof system could be considered at the school to save costs and said that they had installed this type of roof successfully on several projects. Collier expressed concern about scaling back on the type of roof due to the amount of roof-mounted equipment that will require ongoing access by maintenance personnel. He also said that the $33K in savings was not large enough to sway the Owner to change to another roof type. After some discussion, it was agreed that this option could be reviewed after bids are taken for the High School.
Thompson said that the meeting of AAG, Thompson-Turner and the MEP Design Engineers after the bids was well received by the designers who readily understood the budget constraints and allowed needed adjustments with regard to systems and equipment. He said, however, that he too was not comfortable with the HVAC Controls portion of the project.

Lather cautioned that OSF has not issued their final comments on the plans and said that any additional requirements of the agency could come at an additional cost. He said that he had been trying to contact OSF by phone to see if there would be any further requests by their office.

Turner said that the contractor’s Bid Books were available for review by the District and noted that the current plumbing (Thomas Electric Company) and electrical (FM Young) companies working on Phase 1 demolition, electrical relocation and portable work at the Middle School would continue during the Phase 2 building work. He said that Triad Mechanical was the low bidder for the HVAC portion of this work and asked that formal approval be granted to allow the work to begin while holding some portions of the project until bids are received for the High School as previously discussed.

**Bamberg-Ehrhardt High School Renovation Project**

After reaching agreement regarding work to be included into the Middle School Phase 2 project, Collier questioned how lessons learned from the Middle School Bid would be incorporated into the upcoming bids for work at the High School. It was agreed that all savings options incorporated into the Middle School would be included in the High School plans by addendum as the project was now advertised for bidding. Turner said that the HVAC specifications must be “opened up” to allow competitive bidding by multiple companies supplying HVAC units. He said that line item budgets for the High School project were more conservative and anticipated that savings from the High School bids could be used to incorporate Alternates being held for the Middle School job. He said that with bids for the High School scheduled for May 3, 2011; plans and specifications need to be reviewed thoroughly so Addendums can be issued.

Turner said that he had directed his team to be proactive about getting bidders to participate in the upcoming High School bid. He said that other trades would be courted to bid the work even though many companies were already committed to summer renovation projects this year.

Thompson confirmed that MEP design engineers would be issuing an addendum to incorporate agreements reached after the Middle School bids. Collier again reminded the designer to have appropriate conduit installed to allow a separate contract HVAC Controls vendor to install this system.

Lather reiterated his concern regarding the lack of OSF comments for this project as well and agreed to contact the agency to see if there would be any major concerns noted by the reviewer. He also said that OSF should be advised that the Phasing Plan for the project would be changed from prior discussions. Thompson and Lather said that in light of the recent completion of design work, the addition of the 3-hour wall in the
High School and upgrades associated with this wall would be completed this summer with the remainder of the interior upgrades scheduled for the summer of 2012. When questioned by Schwarting, Thompson said that previously discussed work to complete Kitchen upgrades would begin this summer.

**General Items**

Heichelbech reported that the demolition and haul-off of the Allen Building at B-EMS was nearing completion during the Spring Break. He confirmed that cornerstones from the building were salvaged and were being housed in the job trailer on site.

Collier reported that GME Engineering had started work in the District to do OSF required Inspection and Testing Services for both B-EMS and the New Elementary School projects.

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**END OF MEETING**

**NEXT MEETING(S)**

**APRIL 21, 2011 AT 2:00PM**
BAMBERG-EHRHARDT HIGH SCHOOL PRE-BID CONFERENCE
BAMBERG-EHRHARDT HIGH SCHOOL CAFETERIA

**APRIL 25, 2011 AT 7:00PM**
BAMBERG SCHOOL DISTRICT ONE BOARD MEETING UPDATE (By BCG Only)
BAMBERG-EHRHARDT HIGH SCHOOL

**APRIL 27, 2011 AT 10:00AM**
BAMBERG-EHRHARD MIDDLE SCHOOL - WEEKLY PROJECT MEETINGS BEGIN
BAMBERG-EHRHARDT MIDDLE SCHOOL JOBSITE TRAILER

**MAY 3, 2011 AT 2:00PM**
BAMBERG-EHRHARDT HIGH SCHOOL BID OPENING
THOMPSON-TURNER CONSTRUCTION/offices
SUMTER, SC

The meeting was concluded at approximately 12:00 P.M. The contents of the meeting minutes noted above are the writers interpretation of the primary discussions held during the course of the meeting. Should the information listed herein be misleading or inaccurate in any way, please notify the writer within seven (7) days after receipt.

*AAG Architects and Thompson-Turner Construction will be responsible for the distribution of these meeting minutes to the appropriate consultants as necessary.*
04/21/2011

Mr. Ben Thompson, AIA
Altman Architectural Group
37 Marshellen Drive
Beaufort, SC 29902

REF: Bamberg Ehrhardt Middle School Additions and Renovations
Bamberg, South Carolina

Mr. Thompson:

Thank you for allowing Thompson Turner Construction to provide our latest estimate for your use. Per your request, we are pleased to provide the following estimate for the additions and renovations to Bamberg Ehrhardt Middle School Bamberg, SC. We have included the following in this estimate:

- Demolition including site, building, and interior
- Site Development including utilities, paving, canopies, etc...
- Addition of new classrooms, administration area renovation, general renovations throughout entire school with the exception of the Commons, Media, and Science areas
- New facade at building front as well as new windows as shown in the documents
- Demolition and construction related to the new fire wall
- Demolition and construction related to new kitchen equipment
- HVAC upgrade and Programmable Thermostats
- Electrical upgrade
- Extensive plumbing work related to renovated areas

Base Bid Construction Cost ................................................. $3,099,908
Contractor Controlled Contingency ................................. $140,000

Total Construction Cost Base Bid .................................. $3,239,908

Alternate 1 Band/Art Building Add ........................................... $311,705
Alternate 2 Pre Engineered Canopies Add ............................ $67,500
Alternate 3 New Rear Parking Lot Add ................................. $23,339
DDC Controls Monitored Add...........................................$79,132
DDC Controls Not Monitored Add.......................................$71,541
Gymnasium Roofing Add..................................................$47,064
Intercom System Add..........................................................$17,705
TPO Roof Deduct.................................................................($33,004)

Qualifications & Clarifications to the Scope of Work
- Builders Risk insurance by others
- Permanent power provided by owner
- Business license fees are included
- Building permit is by others
- Tap fees are excluded
- Division 1 and Division 17 testing is excluded
- A performance and payment bond is included in the price above
- LEED certification is excluded
- Our price includes a contingency allowance as shown above
- This budget is based on construction document plans dated 03/14/2011
- OSF comments have not been received and are excluded from the price above

Thank you again for contacting us about this project. We look forward to working with you.

Sincerely,

Marion L. Gunter
Thompson Turner Construction Co., Inc.
### Project Capital Cost

Sheet 1 of 2

#### Site Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase price of land</td>
<td></td>
</tr>
<tr>
<td>Closing costs</td>
<td></td>
</tr>
<tr>
<td>Site Inspection, Surveys and Subsurface Investigation</td>
<td></td>
</tr>
<tr>
<td>Site Preparation and Infrastructure</td>
<td></td>
</tr>
<tr>
<td>Other (Demolition, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Site Costs</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### Miscellaneous Project Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Equipment (includes Kitchen, A/V, I.T., and other equipment)</td>
<td></td>
</tr>
<tr>
<td>Movable Equipment (includes athletic, art, science, office and other equipment)</td>
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</tr>
<tr>
<td>Furniture</td>
<td></td>
</tr>
<tr>
<td>Landscaping</td>
<td></td>
</tr>
<tr>
<td>Consultant Fees</td>
<td></td>
</tr>
<tr>
<td>Legal Fees</td>
<td></td>
</tr>
<tr>
<td>Architect &amp; Engineering Fees</td>
<td></td>
</tr>
<tr>
<td>Specialty Consultants (Food Service, IT/Communication, Owner’s Field Representative, other)</td>
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</tr>
<tr>
<td>Special Inspections</td>
<td></td>
</tr>
<tr>
<td>Financing Costs (Bond, Loan, etc.)</td>
<td></td>
</tr>
<tr>
<td>Interest During Construction</td>
<td></td>
</tr>
<tr>
<td>Other</td>
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</tr>
<tr>
<td><strong>Total Miscellaneous Costs</strong></td>
<td></td>
</tr>
</tbody>
</table>

Total **Site Costs** $ [value]

Total **Miscellaneous Project Costs** $ [value]
### Project Capital Cost
Sheet 2 of 2

**Construction Costs (by Masterspec divisions)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Requirements</td>
<td></td>
</tr>
<tr>
<td>2. Existing Conditions</td>
<td></td>
</tr>
<tr>
<td>3. Concrete</td>
<td></td>
</tr>
<tr>
<td>4. Masonry</td>
<td></td>
</tr>
<tr>
<td>5. Metals</td>
<td></td>
</tr>
<tr>
<td>6. Wood, Plastics, and Composites</td>
<td></td>
</tr>
<tr>
<td>7. Thermal and Moisture Protection</td>
<td></td>
</tr>
<tr>
<td>8. Openings</td>
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</tr>
<tr>
<td>9. Finishes</td>
<td></td>
</tr>
<tr>
<td>10. Specialties</td>
<td></td>
</tr>
<tr>
<td>11. Equipment</td>
<td></td>
</tr>
<tr>
<td>12. Furnishings</td>
<td></td>
</tr>
<tr>
<td>13. Special Construction</td>
<td></td>
</tr>
<tr>
<td>14. Conveying Equipment</td>
<td></td>
</tr>
<tr>
<td>15 - 20 Not Used</td>
<td></td>
</tr>
<tr>
<td>21. Fire Suppression</td>
<td></td>
</tr>
<tr>
<td>22. Plumbing</td>
<td></td>
</tr>
<tr>
<td>23. Heating Ventilating and Air Conditioning</td>
<td></td>
</tr>
<tr>
<td>24 and 25 Not Used</td>
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</tr>
<tr>
<td>26. Electrical</td>
<td></td>
</tr>
<tr>
<td>27. Communications</td>
<td></td>
</tr>
<tr>
<td>28. Electronic Safety and Security</td>
<td></td>
</tr>
<tr>
<td>29 and 30 Not Used</td>
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</tr>
<tr>
<td>31. Earthwork</td>
<td></td>
</tr>
<tr>
<td>32. Exterior Improvements (walks, drives, etc.)</td>
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</tr>
<tr>
<td>33. Utilities</td>
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</tr>
</tbody>
</table>

Sub-total Construction Costs $ 

**Contingency**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>Owner</td>
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<tr>
<td>Escalation</td>
<td></td>
</tr>
</tbody>
</table>

Guaranteed Maximum Price (GMP) $ 

**TOTAL PROJECT CAPITAL COSTS** $