BIM FOR MASONRY

Educational Program Proposal

For the Masonry Construction Industry

March 3, 2013

MULTIPLE COURSES

EXECUTIVE SUMMARY

OVERVIEW

The scope of this project is to create a training course that can take someone in the masonry construction industry from unskilled with computers to an individual who is competent with Building Information Modeling. This report will outline the courses we plan to develop in order to reach the following target audiences. The identified audiences are masons with little to no computer skills, for individuals that are computer skilled and have no background in construction management, individuals with computer and project management skills, individuals with BIM experience and lastly training with BIMM when the software becomes available.

BUDGET

At the present time, this is a draft budget. The intent of this report was to begin the discussion of the type of effort necessary to produce each step of the BIM for Masonry Training Courses. In the following pages you will see a description of what the intended training is, the deliverables for each course and the anticipated cost associated with developing the course, materials and training packets. The following is a breakdown of the anticipated cost to create the materials.

Course 1 – Computer Skills Training ……
Using Computers, filing documents, using Word and Excel

Course 2 – Construction Management Training ……
Using basic scheduling and estimating programs

Course 3 – BIM Introduction ……To Be Negotiated with AGC
Using course generated by the Associated General Contractors

Course 4 – BIM-M ……
Advanced training for individuals with BIM experience

Course 5 – BIM-M Software Training …… $TBD
Advanced training with BIMM software when available

SCHEDULE

The five courses could be broken up into two different phases. Phase one could include course 1, 2, 3 and 4. Course Five will have to wait until the software has been developed. The planning for this course can be addressed at a later date.

PROJECT CHALLENGES / ISSUES

The challenges I foresee to the creation of the classes will be getting timely feedback from the executive committee, quality examples to put in presentation materials.

COURSE ONE – BASIC COMPUTER SKILLS

OVERVIEW

The scope of course one is to introduce a mason or masonry contractor to the basic software skills that are becoming common place in the construction industry. This course will focus the training on introducing them to the Microsoft Office package of Word, Excel and Outlook. This course will also make them aware of the power of applications on the cloud such as Google Mail, Google Docs and Google Calendars.

The goals of this course would be to help masons and contractors that have let their fears of computers and the rapid adoption of technology hold them back from evolving with the times.

SCHEDULE

This course is anticipated to be a four (4) hour course. If it was determined to introduce them to the online functionality of some of this software, I could see this course being elongated to an eight (8) hour course. As of today, the Microsoft packages may be adequate, but within a year or two of this course being offered, Microsoft is planning to have everyone on their 360 platforms which are cloud based. I think it would be best to plan for the future with this course and not wait. It may also increase the interest level of this course.

DELIVERABLES

The course could be given locally and the deliverable would be a take home packet that introduces them to the options of software available to them. It would also cover how to setup and use the basics of these applications. We would also need to develop a teaching packet that would be delivered to the potential instructors for local, state and national courses.

COST –

COURSE TWO – BASIC SCHEDULING AND ESTIMATING

OVERVIEW

The scope of course two is to introduce the mason and masonry contractor to some of the basic software and technics for scheduling and estimating a project. The software covered could include Microsoft Project and Microsoft Excel. As the computer skills are critical, the class will also focus on the concepts of scheduling and estimating.

SCHEDULE

This course is anticipated to be an eight (8) hour course. The bulk of the training would need to be on introducing the participants to estimating and scheduling concepts that will prepare them to pursue complex jobs that require a higher level of planning and execution.

DELIVERABLES

The course would eb given locally and the deliverable would be a take home packet that introduces them to the options of software available to them. It would also cover how to setup and use the basics of these applications. We would also need to develop a teaching packet that would be delivered to the potential instructors for local, state and national courses.

COST –

COURSE THREE – BIM INTRODUCTION (AGC)

OVERVIEW

This is a course based upon one that has already been created by the Associated General Contractors of America. The course is designed to introduce people to the world of Building Information Modeling. This course is currently in its second revision. The last revision was completed at the end of 2012 and was rolled out at the beginning of 2013. This class will introduce people to 3D Modeling, 4D Scheduling, 5D Estimating, Facilities Management BIM, Laser Scanning, Horizontal BIM as well as applications of BIM in the Cloud.

After discussions between David Biggs, Art Theusch and the AGC, we have decided it would be unwise to try to replicate the great product they have already created. We still need to clear up the cost associated with using their course.

SCHEDULE

This course is a solid eight (8) hour day. This is the first in a four part series that, once completed, participants could sit for the CM-BIM exam. Instructors for this course would probably need to be approved by the AGC to teach this course. The good news is there are almost 100 certified teachers or this course in the US.

DELIVERABLES

The course would be provided locally and the deliverables are already completed and would be available for purchase for use by the instructors as well as the participants. They include a teaching guide, PowerPoint slide presentations and a participant manual for the instructor.

COST – To be determined.

COURSE FOUR – BIM FOR MASONRY

OVERVIEW

The scope of this course would be to expand on the concepts that were taught in the previous course. The goal would be to introduce the participant to what is currently happening in the world of BIM as it relates to Masonry. We would like to show examples as early as design all the way to the completion of construction. The goal of this course would be for participants to walk away with real world examples of how they can apply BIM to their company as soon as they step foot in the office.

SCHEDULE

This course is anticipated to be a twelve (12) hour course.

DELIVERABLES

The course would be provided regionally or nationally until there are a sufficient number of masons and contractors prepared for this level of training. The deliverables for this course would be the most in-depth of all the classes offered so far. We would want to create a participant's manual, teacher's manual as well as PowerPoint presentations for the instructors to use. None of this material has been created yet to our knowledge and would be a massive under taking, but we feel it is the appropriate product to deliver to the participants as well as the trainers.

COST –

COURSE FIVE – BIM–M SOFTWARE TRAINING

OVERVIEW

The final course to be offered in the series is the BIM-M Software Training course. The intent of this course is to physically train the students on how to use the newly created software. This would be hands on software course that would require a computer with the software installed. We would hope to train them on all aspects of the software functionality. This course could be offered to all participants of the AEC community with emphasis on the masons and contractors. The broad nature of the potential participants could force us to think about breaking this down into subclasses of software training.

SCHEDULE

With the concept of subclasses in mind, it may be wish to consider an eight (8) day for each vain of the training we would like to offer. If we keep it too broad of an introduction to the software, participants may feel inadequate when they return to their companies. If the focus was zeroed in on a specific audience, we could demonstrate functionality of shop drawings and the ability to quantify what's in the shop drawings for estimating purposes. I see this as potentially two courses; the first one for the designers (Architects, Engineers and Material suppliers) and the second one for the construction side (Contractors, Construction Managers and Masons).

DELIVERABLES

I foresee the deliverable of this course being closer to a help manual you would see with the existing software. It could be tutorial trainings that teach the different audiences on how to achieve the desired results. We could focus each tutorial on the following audiences; designers, engineers, construction managers and Masonry contractors.

COST –