



ASC Competition 2024
Regions 6 and 7

Integrated Project

Problem Preview

Clark Construction Group
10/2/2023

INTRODUCTION

Clark is pleased to offer this preview of the ASC Competition category; the "***Integrated Project***" problem for the 2024 competition. In this category Clark seeks to bring the real world to the competing students, with the hope and expectation that you will learn and grow from the experience. Our intent is to show you the cutting-edge projects and delivery methods we deal with, from the perspective of the senior-level people who are making it happen.

In the United States, and perhaps in much of the western world, the methodology of delivering major building construction projects continues to evolve. The historical method of "lump-sum" bidding for the general contract has all but faded away, and more negotiated forms of contracting now predominate. This change is being driven primarily by the simple fact that collaboration towards a common goal by a diverse group of project stakeholders results in an improved process. The improvement payoff is generally greater efficiency and less waste in the project delivery itself, but is also evidenced by shorter delivery schedules and higher levels of quality. It could be argued that the more integrated the project delivery team, the more the payoff as described above. Ultimately, individual members of a delivery team, such as the general contractor, the design professionals, the major subcontractors and the owner, will all be affected financially by the level of collaboration and the relative success of the process.

The term that best describes a delivery process exhibiting high levels of collaboration and sharing of risk and reward is ***Integrated Project Delivery***, or IPD. Because this project delivery methodology is evolving, the extent and nature of the risk/reward sharing varies widely from project to project, and even between participants within a single project.

So, what is it about Integrated Project Delivery that makes it different? What more do you do beyond design-build? How do you execute an IPD approach that results in a

better design process, a better construction process, a better physical end product, at a lower cost and in a shorter time? How do you utilize the profit incentive of the various private enterprises to drive process improvement?

For the ASC Regions 6&7 2024 *Integrated Project* Competition, the competing teams will have to answer those questions, apply them to a real world project, and bring us the results.

THE 2024 PROBLEM

Clark will present a problem this year focused on the execution of a large, complex project using an Integrated Project Delivery approach. The student teams will each assume the role of the General Contractor on the project. The judges will act as the Owner's Representatives. Together, we will work through the subject project, identifying problems, and solving them in an integrated format. The goal is to complete the project at the lowest responsible cost and time, while staying true to the Owner's project criteria requirements.

You will need to be familiar with higher-level construction management and related skills such as Design-Build, BIM/VDC, Lean Design and Construction, LEED, etc. You must not lose sight of the traditional core construction skills such as estimating, scheduling, constructability analysis, site utilization, project management planning, etc. You must be comfortable with your ability to understand the nature of the problems the project encounters, and then work within an integrated team environment to solve them. You must understand the capabilities and limitations of the various team members involved, and be able to create the most effective solutions. Your willingness and proficiency at inter-team and intra-team collaboration will be key.

One member of each team should identify themselves to Wendy Bohn, the lead Clark Construction judge, at wendy.bohn@clarkconstruction.com by 1/12/2024. Also, we would like to get to know all team members before the competition. Each team captain should email a copy of their team resumes to Wendy Bohn by 1/12/2024.

The Problem Statement will be distributed to all teams in person at 7:00 AM on Thursday, February 8, 2024. Please locate the Clark room the day before the event to ensure you are there on time. These documents will describe in detail the exact condition of the project at that moment, for the purposes of our competition. This will include data relative to financials, safety, schedule, quality control, design/scope and other relevant factors. Clark judges will conduct an open Q&A session at 10:00AM to ensure all teams understand the documents and the current status of the project.

Clark will identify a number of project problems or challenges to be solved. Clark judges, acting as the Owner, will visit with each team to engage with them relative to their proposed solution to each discrete problem in turn. The teams will be expected to demonstrate the internal evaluation and negotiation process they followed in reaching

their solutions, and to quantify the results in terms of impact on the overall project. There is no assurance the "Owner" will agree with the initial recommendation of the student team, and debate regarding a more cost-effective path may result.

An early written deliverable on five of the issues will be due at 1:00PM Thursday and the written deliverables for all remaining issues will be due to the judges at 10:00PM on Thursday.

These two deliverables will be the written deliverable of the competition. These documents must represent your team's combined solutions to all the individual problems, and the cumulative effect these solutions will have on the overall project results. There will be no specific need for graphic representations of solutions unless sketches are needed for clarity. If so, these graphics will not require preparation by an architecture student, but you are welcome to include one on your team if desired.

On Friday, oral discussions will be held in person with the judges. The judges will continue in the role of the Owner and you will continue to act as the General Contractor of the Integrated Project Team. This is not a presentation, it is a business meeting. The focus of the oral discussion should be on communication and explanation. Your team should demonstrate how and why you reached the solutions that you did, be prepared to defend them, and gain the Owner's concurrence.

SKILLS REQUIRED

This is a construction management competition based on a large, complex construction project including broad services from design to project management. The most efficient method for executing such a project is now generally referred-to by the term "Integrated Project Delivery". The skills required in order to be successful with an Integrated Project are the same skills that are required to manage design-build projects but in a highly collaborative and proactive environment using best practices including current technology. The best performances will be by teams encompassing both the traditional skills of; scheduling, budget awareness, design management, and problem solving; as well as well-developed communication, collaboration and teamwork abilities. The key to success is in thinking broadly about the varied interests and capabilities of all the diverse team members, and in conjunction with a strong understanding of each problem, bringing those two aspects together to discern the most effective, efficient resolution. Teams must be familiar with the concepts and application of the principles of; Design-Build, BIM, LEED, and all general pre-construction services.

OTHER INFO

In both the written and oral portions, the judges will expect to see a quality work product suitable to the professional business environment we work in. This means the reports and resolution proposals must be neat and organized. Additionally, do not spend any time in

either the written or oral work “selling” the imaginary company your team represents; instead put your time into the content of your work. Do not spend time incorporating pre-packaged materials such as generic safety plans, generic project management plans, or generic quality control plans. These will distract you from the essential parts of the competition.

Teams will be provided with electronic documents and you must have compatible software. In addition, all teams must have scheduling software of your choice for producing a project schedule.

Since this problem includes a “design-build” element, there will be a design component to your work, in that all teams must describe how they propose to resolve the project problems and this may involve design changes. It is not necessary to include architectural students on your teams. The level of graphic information that is required to communicate the proposed problem solutions is not above the "sketch" level, well within the skills expected of a design-build construction project manager.

Written problem solution deliverables must be submitted to the judges in an electronic format. Clark will provide a flash drive for the teams to upload their deliverables to. In addition, teams must email a copy of their deliverables to Wendy Bohn at wendy.bohn@clarkconstruction.com. The team is expected to electronically tab their answers to the questions. Your school’s name should appear on the front cover of your report. Further requirements and advice will be provided with the Problem Statement.

For the oral discussions, there is no need to utilize PowerPoint, however your team may do so if you desire. The focus of the oral discussion is on the content of your problem solutions and the communication of that, as well as your thought process, to the judges. You should expect considerable Q&A, including an effort by the judges to determine the thought process that went into each portion of the solution.

The student teams will be comprised of six members each. Teams may consist of all graduate students, all undergraduate students, or a mix of each. Clark will enforce the current competition rules as agreed among ASC faculty and sponsors.

Clark will not provide lunch/dinner for the teams on Thursday or Friday, so it will be each school’s responsibility to plan meals accordingly.

Because of the judging visits and joint working sessions, there will be close interaction between the student teams and the judges during the preparation of the teams’ written work product. There will be limited judging of the students’ interaction during those sessions. Judging of the written problem solutions submitted to the judges will be judged specifically on the written work product. Additionally, judging of the teams for their group and individual interaction with the judges will occur during the oral discussions.

Clark expects the competing students to give back to their universities and programs by sharing the lessons. The projects and delivery methods you will be exposed to are representative of the most evolved and even futuristic that are to be found. Take advantage of this chance to expose your fellow students to the techniques they may soon encounter in their work.

The 2024 event will continue the legacy of exciting ASC competition in Regions 6 and 7. At Clark Construction Group, we believe this event should be fun, challenging, educational, and competitive. We look forward to meeting you!