



The Power of Technology | People | Integrity

PROBLEM PREVIEW:

Introduction:

Cupertino Electric, Inc (CEI) welcomes students and teaching professionals to the 25th Annual Associated Schools of Construction Student Competition. CEI is proud to sponsor the ASC Open Electrical Problem at the 2012 ASC Region 6 and 7 Competition.

For over 57 years, CEI has established itself as a premier provider of electrical construction and engineering solutions. We have become a leading force at all levels of project design, development, management, installation and commissioning. From constructing electrical systems to the first microchip fabrication facility and sophisticated biotech plants to delivering power reliability for mission critical facilities, CEI has developed an unyielding reputation as a leader in our industry.

The purpose of this problem is to provide and enhance the student's experience in specialty construction. One of our goals is to diversify the educational experience of the competition by exposing students to the increasingly significant role of major specialty contractors and subcontractors in today's construction industry.

Problem Description:

The proposed problem will be a high density residential project in San Francisco, CA. The project includes procurement and installation of several systems, including: switchgear and distribution equipment, feeders, branch circuit wiring, light fixtures, and the use of various subcontractors for fire alarm, security, and voice/data cabling systems. Each competing team will be responsible for the design and layout of a portion of the project.

Each team will be provided with a set of plans, specifications, basis of design, general contractor's schedule, estimating software, contract, general conditions, and bid forms.

Project Overview:



Student teams will be the short listed electrical contractors selected to propose and interview for this challenging new project. Students will participate as the project team members of their company and present to the owner's project team for selection.

Our primary goal will be to make this setting and interaction as "real life" as possible, very similar to the proposal and interview selections that we participate in almost every week in our industry.



Evaluation Criteria:

Each team will be required to compile an estimate and schedule with the material provided by CEI. Teams are expected to have the skill sets required to perform quantity take-offs, cost estimating, scheduling, and evaluate subcontractor and vendor quotes. After compiling detailed estimate, schedule, and any other requirements, team members will participate in an oral presentation during a proposal interview. All teams will be required to submit all documentation and back-up material for requested items in an organized binder. Any materials used for the oral portion of the competition will be submitted by all teams on the morning of the oral presentations.

The successful team proposal will be based on the overall project budget, realistic construction schedule, oral and deliverable presentation of materials, and an understanding of the scope of work involved in the project.

Each team will be graded on the following:

Percentage of Total:

Prequalification Proposal: 10%

- Project team resumes with organization chart
- Safety road map
- Corporate Information
- Contract Review

Written Proposal:.....50%

- Bid form, proposal letter with clarifications
- Cost estimate
- Value engineering and cost management
- Schedule; man loaded per milestones
- Written narrative on approach to project
- Design-build layout information



- Schedule of values, cost breakdown

Oral Presentation:40%

- Team presentation
- Presentation materials
- Response to questions
- Ethics



Team Preparation:

Teams well prepared for this problem will exhibit the following skills and knowledge on the following topics

- Understand fair contract language for subcontractors
- Electrical distribution equipment and feeders
- Understanding of electrical branch wiring systems for commercial and residential installations
- Electrical take-off and estimating techniques
- Applying requirements from Title 24 for lighting layout and lighting controls for both commercial and residential projects.
- Scheduling: understanding crew sizes/manpower requirements and coordinating subcontractor schedule with GC schedule
- Coordination with other MEP trades
- Team collaboration and problem solving techniques
- Ethical contracting business practices

Competition Rules:

CEI will promote a spirit of fair competition during these ASC events. Competing teams must abide by rules set forth in ASC 2012 Competition Rules. In addition, CEI will be enforcing the following. Should CEI find any violation of any of the rules set forth by ASC or CEI, CEI will reserve the right to deduct points for ethics or disqualify the team.

Additional Rules by CEI:

1. Only six (6) individuals are allowed to compete once the competition begins.
2. No individual other than the six registered participants will be allowed in the work rooms. There will be no “runners” allowed during the competition.
3. The competition will begin when the problem statement is handed out and will conclude when the team has presented to the judging panel.
4. The use of the Internet will be allowed during the competition. More information regarding the rules and restrictions of Internet use will be issued at a later date.
5. Internet access will be required. Information will be issued electronically by CEI to all competing



teams during the competition.



Project Details

The project that your company is bidding on is a high density residential project in San Francisco, CA. Each team will need to be familiar with the following items to successfully bid this job:

- Distribution switchgear and feeders
- Panel boards and branch circuiting/outlets
- Light Fixtures
- Title 24 Requirements
- Lighting control/dimming
- Fire alarm systems
- Tele/data rough-in and cabling
- Security rough-in and cabling
- Residential branch circuits per NEC

Each team will be required to use a basis of design outline, Title 24 requirements, and the NEC to design and layout some specific areas of this residential project. Additional electrical systems such as power outlets, tele/data cabling, and security system will also be an important part of the design-build presentation.

Required Software Usage

Cupertino Electric, Inc. has made arrangements with Accubid Systems to provide estimating software for the 2012 ASC Open Electrical Problem. Accubid is a provider of estimating, project management and service management software. Teams will be required to perform the estimating portion of the problem using Accubid software. Each participating team will be contacted the first week of December to make arrangements for software training. Please check the Region 6&7 ASC website for updates.

Additional Notes:

Once your team has been assembled for the competition, please e-mail Kathy Abbott at Kathy_Abbott@cei.com with your team roster and the main **point of contact for your team**. CEI will be coordinating additional information to your team.



Contact Information:

We encourage teams and individuals to ask questions. Feel free to direct any questions you may have toward the following CEI representatives:

Contact: Erin Rolita
Phone: 415-970-3468
E-mail: erin_rolita@cei.com

Contact: Kathy Abbott
Phone: 408-808-8075
E-mail: Kathy_Abbott@cei.com

Contact: Mike Garner
Phone: 415-970-3408
E-mail: Mike_Garner@cei.com

Good luck, work hard and have fun!