

Contest 3: Documentation

As-Built Drawings and Submittals (40 pts):

The Architecture Jury and an Engineering Panel of Judges will judge the as-built drawings and submittals according to the following criteria:

- Efficiency
- Organization
- Comprehensiveness
- Quality
- Creativity.

Schematic Energy Analysis Report (40 pts):

Each team will be scored on the contents of a report that summarizes its pre-design/schematic design analysis of energy performance for its house. Teams are encouraged to apply the concepts of whole building design to their pre-design analyses, including the use of computer simulations to model alternatives. The Energy Analysis Panel of Judges will evaluate the report according to the following guidelines:

- Assumptions: Significant assumptions regarding the analysis or simulation (or both) are identified
- Simplifications: The simulation is as simple as possible without compromising accuracy, and all significant simplifications are identified and justified
- Improvisation: Currently available software may not contain routines for all situations, and any necessary improvisations to simulate a specific component or system are documented and justified
- Energy performance: Design steps taken to optimize energy performance, including predicted annual energy requirements of the proposed design, are discussed.

The Panel of Judges will be looking for effective communication and synthesis of the team's design and analysis process with focus on the application of sound modeling and engineering principles and creative analysis according to the following criteria.

Communication:

- Effectively communicates the intended integration of building elements and systems
- Communicates the analysis steps supporting design recommendations including, parametric and optimization studies and custom and specialized analysis for specific components
- Demonstrates effective, creative use of graphics to condense and summarize key analysis

- Conveys the design process (architectural programming, design goals, whole building strategies)
- Includes summary drawings of plan and elevation to convey key geometrical and architectural information
- Demonstrates organization and consistency in main and supporting documents
- Innovative visual style enhances organization and access to report findings.

Engineering:

- Summarizes clearly the thermal and electric loads used in the analysis, and comparison or reference (or both) to standard load assumptions such as *ASHRAE Standard 90.2*
- Summarizes clearly the key assumptions such as envelope characteristics, lighting level, and thermal set-points
- Demonstrates awareness and testing of design against “high performance” energy efficiency strategies
- Demonstrates awareness and attempt to integrate building architecture and systems
- Demonstrates innovative and creative analyses where standard tools are limited
- Identifies clearly the key assumptions and supporting information where engineering approximations are required
- Demonstrates quality control checks (e.g. order-of-magnitude analysis, corroborating data from multiple sources, sign-off by multiple reviewers) on component and overall analysis.

Final Project Summary (10 pts):

Each team shall submit a report that describes the evolution of the design from conception to completion (Narrative) and reports the costs incurred during the Project (cost report). The Organizers will award points according to the following criteria:

- **Timeliness:** On-time submittal of final project summary
- **Completeness:** submission of all required elements of the project summary
- **Presentation quality:** Narrative and cost report are written in a format that will be suitable for conversion into Communications Materials
- **Detail:** Narrative and cost report efficiently condense a large amount of useful information into a relatively small number of pages
- **Accuracy:** A random sample of information in the cost report will be audited for accuracy.

Pre-Event Project Deliverables (10 pts):

On time, complete submittals of pre-event project deliverables (not including the as-built drawings and submittals, schematic energy analysis report, and final project summary) will earn up to 10 points.

Contest Activity	Points Available
As-Built Drawings and Submittals	40
Schematic Energy Analysis Report	40
Final Project Summary	10
Pre-Event Project Deliverables	10
TOTAL	100