SECTION 4: SUBMISSION REQUIREMENTS

Entry Format

Entrants in Challenge 1 may submit two or three 30" x 40" boards arranged with the 40" edge vertical. Entrants in Challenge 2 should submit two 30" X 40" boards arranged as above. The boards should be a lightweight rigid material such as illustration or foam core boards. They may not be more than 1/2" thick and no part of the entry may project from the surface or the boundaries of the boards. No masonite or heavy board material will be accepted.

Creative and informative board designs are very important. The best entries will clearly communicate both the design intent and environmental concepts used in the project in a pleasing and appealing fashion. Use of text, titles, and graphic symbols to explain and identify important aspects of the proposal is encouraged. Presentations may be made in any print, drawing, or photographic medium including prints from CAD, 3-D modeling, or rendering programs, however entrants should keep in mind that the boards will be handled by the Competition staff before and during judging and photographed after judging. Any presentation medium should resist smudging or smearing under normal handling conditions and all mounted materials should be attached securely.

Entries that consist of more than one board should be clearly marked on the back to indicate the arrangement of the boards (i.e. right, middle, left, top, bottom).

All boards and documents must be marked with the entrant's registration number on the back. No other identifying mark is allowed. Any entry that does not maintain the entrant's anonymity will be disqualified.

Narrative

Each entry must include a brief narrative of approximately 500 words somewhere on the face of the boards. The narrative should discuss the overall energy efficiency and environmental sustainability aspects of the design. Each narrative should describe the way in which the design specifically addresses the technical subjects in the Technical Requirements Section, Part I. For example, this discussion might include specific details of the window placement, shading design, thermal mass strategies, natural ventilation applications, daylighting strategies, water recycling systems, vegetation choice, kinds and placement of paving, and any other approaches used to conserve resources and reduce heating and/or cooling loads. The narrative must defend all choices, including material selections, placement of features, equipment, and ventilation designs, etc. The defense of each feature must have technical merit, which is supported by the diagrams or the calculations included in the presentation. *This is very important: The narrative must demonstrate how your technical calculations informed and changed your design.* The narrative must relate to and refer to the plans, sections, elevations and details shown in the presentation. The judges read the narratives carefully as they evaluate the entries; your narrative should clearly present your design intent and process. *Note: General discussions of why it is good to protect the environment and save natural resources are not appropriate in the narrative. As stated above, the judges want to read about what your design specifically does to accomplish these goals.*

Required Drawings & Technical Submittals for Challenge 1

These drawings and technical submittals are required. Failure to submit all the items in this list will result in disqualification. All plans and site plans should be clearly marked with a north arrow. Scale should be indicated on all plans, sections, elevations and cross-sections.

Note: Entries which do not include all 9 components below will be disqualified and will not be judged.

1. Site Plan. Provide an overall site plan of the Environment & History (E&H) Center site. Include any landscaping and site features within boundaries of the "Challenge 1 Site" as well as the plaza and the barn. All energy efficient and resource conserving features of the site plan should be labeled.
Scale: 1/16"=1'-0".

2. Floor Plans. Provide floor plans of all levels of the E&H Center and the Barn. Any energy efficient and sustainable features that are apparent in the floor plans should be labeled.
Scale: 1/8"=1'-0".

3. Detailed Floor Plans. Provide detailed floor plans of one of the E&H Center classrooms. Label all important aspects of the plans, including any energy efficiency, daylighting, ventilation, or sustainable features.
Scale: 1/4"=1'-0"

4. Elevations. Provide at least two principal exterior elevations of the E&H center that illustrate massing, openings, materials, and related elements. Label all important design elements, and clearly label the elevation's orientation.
Scale: 1/8"=1'-0".

5. Cross Sections. Provide one longitudinal and one transverse section through the E&H Center, and at least one detailed cross section though the classroom shown in the detailed floor plans. The sections should be chosen to illustrate the different daylighting and ventilation strategies used for the building and for the classroom. Those elements should be clearly labeled on the drawing.
Scale: 1/8"=1'-0" or 1/4"=1'-0".

6. Wall Section. Provide one detailed wall section (foundation through roof) that illustrates the proposed materials and construction assemblies for the classroom. Label and clearly explain all energy-efficient and sustainable strategies in all construction assemblies (i.e. floors, walls, roof, fenestration, etc.).
Scale: 3/4"=1'-0" or 3/8"=1'-0",

7. Perspective Drawings. Provide at least one pedestrian's eye level perspective drawing that illustrates important aspects of the design.

8. Supporting Drawings, Graphs, and Diagrams. Include any additional drawings, photos, diagrams, or graphs necessary to convey the design proposal to the jury. This

may include images of models, solar angle diagrams, shading diagrams, ventilation diagrams, summaries of energy performance analyses, calculations and/or any other materials that will illustrate the design intentions. This material must fit on the display surface of the boards. Inclusion of relevant numerical analysis is encouraged to justify design decisions, however, inclusion of multiple sheets of tabulated numerical output is discouraged. Avoid the use of "magic arrows", ventilation arrows that illustrate air moving as if by magic, on the ventilation diagrams.

9. Technical Requirements. As part of Challenge 1, all students are required to quantify the energy efficiency and sustainability of their projects. These technical requirements will be carried out on a single classroom in the design. This classroom should be the one used for the detailed drawings in Item 3 above and should be chosen to illustrate energy and environmental strategies that are most challenging given the site and orientation.

Each entrant is required to submit three of the technical tasks in Part I of the Technical Requirements Section (Section 5) or submit an energy simulation model as described in Part II of Section 5. Summaries of the completed technical tasks as well as discussions of the results should be shown on the face of the project boards. Worksheets and calculation sheets may be placed in an envelope and attached to the back of the boards. If an energy simulation model is completed, place relevant summary results on the front of the board, with more complete output attached to the back of the board.

As mentioned earlier, the 500-word narrative must describe how the design specifically addresses each of the technical subjects in Part I of the Technical Requirements Section (Section 5).

Required Drawings & Technical Submittals for Challenge 2

These drawings and technical submittals are required. Failure to submit all the items in this list will result in disqualification of the entry. All plans and site plans should be clearly marked with a north arrow. Scale should be indicated on all plans, sections, elevations and cross-sections.

Note: Entrants which do not include all 9 components below will be disqualified and will not be judged.

1. Site Plan. This drawing should be an aerial view, illustrating roof forms, walkways, and landscaping on the Challenge 2 site as defined on the downloadable site plan. It should be labeled to indicate energy-related or sustainable design features. The scale should be 1/8"=1'-0".

2. Floor Plans. Provide detailed floor plans of the building. Indicate all rooms, entrances, stairs, indoor-outdoor areas, etc. Label all energy-related and sustainable design features. Scale: 1/4"=1'-0".

3. Elevations. Provide at least two principal exterior elevations of the building. Choose the elevations to illustrate all energy-related and sustainable design features, and label them clearly. Scale: 1/4" = 1'-0".

4. Cross Section. Provide at least one principal cross-section through the building that illustrates the major spaces and volumes, and all energy-related or sustainability strategies. Scale: 1/4" = 1'-0".

5. Eye-Level Perspective Drawing. Illustrate the three-dimensional character of the building with at least one perspective drawing. Show what the building looks like for a pedestrian approaching from the plaza. Inclusion of additional perspectives of outdoor spaces, or major interior spaces is encouraged. (No scale)

6. Wall Section. Provide one detailed wall section (foundation through roof) that illustrates the proposed materials and construction assemblies. Label and clearly explain all energy-efficient and sustainable aspects of all construction assemblies (i.e. floors, walls, roof, fenestration, etc.). Scale: 3/4" = 1'-0".

7. Supporting Diagrams, Graphs, and Drawings. Include any additional diagrams, graphs, drawings, or photos necessary to convey the energy and sustainable strategies of the design to the jury. This may include solar angle diagrams, shading diagrams, ventilation diagrams, summaries of energy performance analyses, calculations, photos of models, and/or any other materials that will illustrate the design intentions. This material must fit on the display surface of the boards. Inclusion of relevant numerical analysis is encouraged to justify design decisions, but the inclusion of multiple sheets of tabulated numerical output is discouraged. Be careful to avoid "magic arrows", ventilation arrows that illustrate air moving as if by magic, when illustrating proposed ventilation patterns.

8. Technical Requirements. Students entering Design Challenge 2 must perform one of the technical analyses from the list in Part I of the Technical Requirements Section, or they may complete a residential computer energy simulation of their design. The technical analysis should be summarized somewhere on the face of the presentation boards along with a brief discussion of the results. Worksheets or any detailed calculations required in the technical analysis should be included in an envelope on the back of the board.

As mentioned earlier, the 500-word narrative must describe how the design specifically addresses each of the technical subjects in Part I of the Technical Requirements Section.