

## Appendix D Competition Deliverables

Throughout the project, the organizers will require teams to submit deliverables necessary for ensuring safety and for generating sufficient interest in the event. These design deliverables serve the following important functions:

- In the **schematic design summary**, the team shall disclose to the organizers all non-standard design features, communications strategies, site operations plans, and health and safety considerations that require further review prior to the continuation of the project into the design development phase.
- The **drawings and project manual** shall demonstrate compliance with the Solar Decathlon China Building Code and the Solar Decathlon China Rules so that the inspectors will be able to grant final on-site approval by verifying that the constructed project on the competition site was accurately represented by the approved drawings and project manual.
- The **drawings and project manual** shall clearly describe a team's proposed assembly and disassembly procedures. The site operations manager will review the teams' procedures to identify and address potential conflicts among the teams.
- The **drawings and project manual** are expected to provide sufficient detail to enable a residential contractor to generate an accurate, detailed cost estimate and to efficiently construct the building as the design team intended it to be built.
- Because the juries have a very limited opportunity to evaluate the constructed projects on the competition site, the **submitted jury deliverables** will provide the only means for a team to provide a detailed presentation of its project to the juries. In the weeks leading up to contest week, each juror shall evaluate the submitted jury deliverables. The primary purpose of the juries' walkthroughs on the competition site is to verify that the project, as assembled on the competition site, was accurately represented in the jury deliverables; and to ask the decathletes any clarifying questions that arose during the evaluation of the design via the jury deliverables.

### D-1. Team Short Description & Project Management Plan

#### *100-word description*

The team shall provide a 100-word description of the team and its goals. This is expected to be used by the organizers for outreach and for placement on the Solar Decathlon China website.

#### *Project Management Plan*

The team shall provide a project management plan that outlines the team's structure, approach to the competition, general work schedule, course integration, and fundraising schedules. The project plan is limited to five (5) pages.

### D-2. Schematic Design Summary

The schematic design proposal will be reviewed by the organizers and feedback will be provided. It will not be reviewed by any juries and will not be made publicly available until after the completion of the competition, with the exception of the renderings, which may be shared on the Solar Decathlon China website.

#### *Format Requirements*

<input type="checkbox"/> Packaged into a single PDF file. Renderings may be submitted separately, if desired
<input type="checkbox"/> Up to 20 pages
<input type="checkbox"/> ISO "A3" (297 mm × 420 mm) sheet size
<input type="checkbox"/> Photographs and images shall be at least 1080 pixels in their shortest dimension and shall be accompanied by information containing the name and affiliation of the photographer or graphic creator and identification of any individuals visible

#### *Content Requirements*

<input type="checkbox"/> Cover page & Design Concept Summary (excluded from page limits)
<input type="checkbox"/> Detailed strategy for the competition, including a contest-by-contest breakdown of features and approaches (1 pages)
<input type="checkbox"/> Design drawings with concise written description of the following systems and components, with identification of any

unique or non-standard systems and components that are being considered (10–15 pages):

- Design Diagrams and Illustrations
- Designed (Temporary) foundations and anchors
- Site Plan, including the competition prototype, tour route, decks, and additional site elements
- Landscaping Plan
- Dimensioned floor plans of all occupied levels with interior design. Include the tour route
- Building sections
- Building Elevations
- Typical wall, floor, and roof sections
- Structural plan and structural system details
- Interior finishes, including a required furniture layout and option details on finishes, cabinetry, and other fixtures
- Plumbing plan and isometric, including fixtures, piping system layout, and on-site water storage tanks. Provide specifications for equipment and fixtures.
- DC electrical plan and one-line diagram. Show integration with PV system.
- AC electrical plan and one-line diagram. Include outlet locations, fixture specifications, control systems, and photovoltaic systems
- Mechanical plans and schedules, indicating duct sizing and layout, equipment locations and specifications (including HVAC and solar mechanical, if any)
- Transportation and on-site assembly approach (modules, cranes, integrated trailers, etc.)

- |   |
|---|
| <input type="checkbox"/> Summary of potential innovations and non-standard elements being pursued (1 pages)   |
| <input type="checkbox"/> Description of public exhibit, communications, and outreach strategy (1 page)  |
| <input type="checkbox"/> Computer-generated renderings of competition prototype design (5+ images excluded from page limits)  |
| <input type="checkbox"/> Health and Safety Plan outline including approach to meeting Occupational Safety and Health Administration (OSHA) training requirement (1 pages) |
| <input type="checkbox"/> Identification of the licensed design professional expected to stamp structural documentation (1 page)   |

### D-3. Team Overview

Teams shall provide updated information on their team strategy, makeup, project design, etc. for use on the China website and for organizer outreach. Teams are encouraged to have developed an online presence (website, social media, blog, etc.) by this time.

#### *Format Requirements*

- |  |
|--|
| <input type="checkbox"/> Packaged into a single PDF file. Renderings and/or audiovisuals may be submitted separately, if desired |
| <input type="checkbox"/> Up to 20 pages  |

#### *Content Requirements*

- |  |
|--|
| <input type="checkbox"/> Updated 100-word description of team and its goals  |
| <input type="checkbox"/> Digital representation (renderings, graphic floor plan, photography of scale model, animation, etc.) of competition prototype design (8-10 images, minimum 1080 pixels in shortest dimension)                 |
| <input type="checkbox"/> Team photograph including as many members of the team as possible and associated file identifying the name of each individual shown and the photographer (1 image, minimum 1080 pixels in shortest dimension) |
| <input type="checkbox"/> Summary of unique project elements, considerations, innovations, research, or technology being considered (1-4 pages)   |
| <input type="checkbox"/> Summary of team's current online presence, including social media accounts and website address, as utilized (1-2 pages)   |
| <input type="checkbox"/> Summary of public outreach conducted and press coverage achieved to-date (1-2 pages)  |

### D-4. Design Development Documentation Submission

The design development submission shall represent 90% complete construction documentation. The documentation shall clearly indicate all design details, house systems, and methodologies expected to be present in the competition prototype on the competition site. While some details may not be fully-complete or finalized,

the design development submission shall provide sufficient information for the organizers to conduct a thorough rules and building code compliance review.

The submission must address the team’s approach to safety, including identification of team-specific concerns and constraints. All major decisions with regard to the project design are expected to be complete. The design development submission will not be reviewed by any juries; however, it may be made publicly available following each submission.

### **D-4-a. Design Development Drawings**

#### ***Format Requirements***

<input type="checkbox"/> Packaged into a single, bookmarked PDF document
<input type="checkbox"/> Up to 150 pages
<input type="checkbox"/> ISO “A3” (297 mm × 420 mm) sheet size

#### ***Content Requirements***

Design drawings, including at a minimum:

<input type="checkbox"/> General - including solar envelope compliance, accessible tour route, finished square footage, water delivery and removal compliance information, and constructed footprint calculations
<input type="checkbox"/> Site - including temporary footing locations, ground penetrations, and adjustable footings
<input type="checkbox"/> Landscape - including plantings, containers, and watering methodology
<input type="checkbox"/> Structural - including building, decking, and associated structures
<input type="checkbox"/> Architectural - including dimensioned floorplans, building sections, detailed sections, reflected ceiling plans, roof plans, elevations, window and door schedules, and exterior structures
<input type="checkbox"/> Interior - including finishes, furniture layout, and cabinetry
<input type="checkbox"/> Fire Protection - including sprinklers and required detection systems
<input type="checkbox"/> Plumbing - including layout, schedules, diagrams, and solar thermal (if applicable)
<input type="checkbox"/> Mechanical - including layout, schedules, diagrams, and installation requirements
<input type="checkbox"/> Electrical - including AC and DC layout, 1-line diagrams, 3-line diagrams, and sizing calculations
<input type="checkbox"/> Telecommunications - including instrumentation, wiring, and associated elements
<input type="checkbox"/> Operations - including house transportation, assembly methodology, and staging

### **D-4-b. Design Development Project Manual**

#### ***Format Requirements***

<input type="checkbox"/> Packaged into a single, bookmarked PDF document
<input type="checkbox"/> ISO “A4” (210 mm × 297 mm) sheet size

#### ***Content Requirements***

<input type="checkbox"/> Project Overview
<input type="checkbox"/> Detailed Water Budget
<input type="checkbox"/> Interconnection Application Form, including summary of any unlisted electrical components
<input type="checkbox"/> Summary of reconfigurable features
<input type="checkbox"/> Health and Safety Approach <sup>10</sup>
<input type="checkbox"/> Energy Analysis and Model
<input type="checkbox"/> Structural Professional Acknowledgement Letter, signed by licensed professional indicating acceptance of the Construction Documentation deliverable deadline and support of team

<sup>10</sup> The team must indicate its approach to meeting the requirements for Health and Safety outlined in Appendix F.

- |  |
|--|
| <input type="checkbox"/> Structural Calculations     |
| <input type="checkbox"/> Construction Specifications |

## D-5. Digital Project Representation

The teams shall submit renderings, photographs, graphics, and/or animations representing the competition prototype design and competition entry for use on the Solar Decathlon China website and in outreach materials generated by the organizers. High quality and varied submissions are expected to lead to greater visibility for the team. This submission can include renderings, photography of scale models or mock-ups, refined graphics, computer-generated walkthroughs, 360-degree virtual tours, or other representations as determined by the team. The organizers will select a subset of submitted documentation for public distribution.

### *Format Requirements*

- |  |
|--|
| <input type="checkbox"/> Packaged into a single, zipped file. If elements are hosted online, a link shall be included in the submission.   |
| <input type="checkbox"/> Photographs shall be at least 1080 pixels in their shortest dimension and shall be accompanied by a file containing the name and affiliation of the photographer or graphic creator and identification of any individuals visible   |
| <input type="checkbox"/> Videos, if submitted, shall be widescreen format and accompanied by a document including a verbatim transcript of the audio narrative to meet <a href="#">Section 508 Accessibility</a> standards and identification of the creator and any individuals visible in the video. Closed captioning does not need to be included within the video file. Permission must be provided for any copyrighted content or audio used as part of the video. |

### *Content Requirements*

- |  |
|--|
| <input type="checkbox"/> Minimum of five images, with at least one exterior, one interior, and one birds-eye view  |
| <input type="checkbox"/> Photographs shall be at least 1080 pixels in their shortest dimension and shall be accompanied by a file containing the name and affiliation of the photographer or graphic creator and identification of any individuals visible   |
| <input type="checkbox"/> Videos, if submitted, shall be widescreen format and accompanied by a document including a verbatim transcript of the audio narrative to meet Section 508 Accessibility standards and identification of the creator and any individuals visible in the video. Closed captioning does not need to be included within the video file. Permission must be provided for any copyrighted content or audio used as part of the video. |

## D-6. Final Construction Documentation Submission

The final construction documentation submission shall represent 100% complete construction documentation, with sufficient detail for a contractor to build the competition prototype house as it is expected to appear on the competition site. The documentation shall include complete and final design details, house system specifications, and construction. While it is recognized that a few minor details may change during construction, the construction documentation submission shall provide sufficient information for the organizers to conduct a final rules and building code compliance verification. The submission must address the team's approach to safety, including identification of team-specific concerns and constraints. The construction documentation submission will not be reviewed by any juries; however, it may be made publicly available following each submission.

### D-6-a. Construction Drawings

#### *Format Requirements*

- |  |
|--|
| <input type="checkbox"/> Packaged into a single, bookmarked PDF document |
| <input type="checkbox"/> Up to 150 pages                                 |
| <input type="checkbox"/> ISO "A3" (297 mm × 420 mm) sheet size           |

#### *Content Requirements*

Complete construction drawings, including at a minimum:

- |   |
|---|
| <input type="checkbox"/> General - including solar envelope compliance, accessible tour route, finished square footage, water delivery and removal compliance information, and constructed footprint calculations |
| <input type="checkbox"/> Site - including temporary footing locations, ground penetrations, and adjustable footings   |
| <input type="checkbox"/> Landscape - including plantings, containers, and watering methodology  |

<input type="checkbox"/> Structural - including building, decking, and associated structures
<input type="checkbox"/> Architectural - including dimensioned floorplans, building sections, detailed sections, reflected ceiling plans, roof plans, elevations, window and door schedules, and exterior structures
<input type="checkbox"/> Interior - including finishes, furniture layout, and cabinetry
<input type="checkbox"/> Fire Protection - including sprinklers and required detection systems
<input type="checkbox"/> Plumbing - including layout, schedules, diagrams, and solar thermal (if applicable)
<input type="checkbox"/> Mechanical - including layout, schedules, diagrams, and installation requirements
<input type="checkbox"/> Electrical - including AC and DC layout, 1-line diagrams, 3-line diagrams, and sizing calculations
<input type="checkbox"/> Telecommunications - including instrumentation, wiring, and associated elements
<input type="checkbox"/> Operations - including house transportation, assembly methodology, and staging

### **D-6-b. Project Manual**

#### ***Format Requirements***

<input type="checkbox"/> Packaged into a single, bookmarked PDF document
<input type="checkbox"/> ISO “A4” (210 mm × 297 mm) sheet size

#### ***Content Requirements***

<input type="checkbox"/> Project Overview
<input type="checkbox"/> Detailed Water Budget
<input type="checkbox"/> Interconnection Application Form, including summary of any unlisted electrical components
<input type="checkbox"/> Summary of reconfigurable features
<input type="checkbox"/> Complete Energy Analysis and Model
<input type="checkbox"/> Construction Specifications

### **D-6-c. Stamped Structural Submission**

The structural submission shall represent a complete structural design, including structural calculations and specifications. The entire submission shall be stamped by a licensed design professional, such as a structural engineer or architect, licensed to stamp residential structural drawings and calculations in the team’s authority having jurisdiction and with educational and professional qualifications comparable to those required for licensure in China.

#### ***Format Requirements***

<input type="checkbox"/> Packaged into a single, bookmarked PDF document
--

#### ***Content Requirements***

<input type="checkbox"/> Stamped structural calculations and specifications demonstrating compliance with the Solar Decathlon China building code
---

### **D-6-d. Health and Safety Plan**

#### ***Format Requirements***

<input type="checkbox"/> Packaged into a single, bookmarked PDF document
--

#### ***Content Requirements***

<input type="checkbox"/> Health and Safety Plan meeting the requirements outlined in Appendix F
---

## **D-7. Project Summary**

The team shall submit an updated description of the project team and design approach, renderings, graphic floor plans, logos, and other relevant information for use on the Solar Decathlon China website and for organizer

outreach about the event. The team shall submit all public exhibit materials the team plans to employ on the competition site, for organizer review of proper use of Solar Decathlon China branding, sponsor recognition, content, etc.

### **D-7-a. Narrative**

#### ***Format Requirements***

<input type="checkbox"/> Packaged into a single, bookmarked PDF file (see Appendix G for PDF formatting and file-naming requirements)
<input type="checkbox"/> 10 pages maximum
<input type="checkbox"/> 11-pt. type, double spaced, 25mm margins

#### ***Content Requirements***

<input type="checkbox"/> A 100-word or less description of your team house.
<input type="checkbox"/> Mission statement. What are team’s goals and values. What is the team’s “personality”? What does the team want to accomplish? What does the team care about?
<input type="checkbox"/> Design philosophy and house design. What is the team trying to portray or accomplish with this design? What will the house look like?
<input type="checkbox"/> Unique house features. What makes the house stand out, or appear unique?
<input type="checkbox"/> Technological innovations. What unique or unusual technologies are incorporated into your house?
<input type="checkbox"/> Market appeal. Who is the target client for the team house? How does the design accommodate the needs and desires of this client?
<input type="checkbox"/> Team organization and contacts. Indicate how your team is organized and approximately how many students, faculty, and others (e.g., sponsors, volunteers, family members) are involved in the project.
<input type="checkbox"/> Future plans for your house. Where will it go after the competition?

### **D-7-b. Team Photograph**

For use in the event program, media kit, and Solar Decathlon China Web site, the team photo is an important conveyance of your team’s personality.

#### ***Format Requirements***

<input type="checkbox"/> Native format of the camera, such as JPEG or RAW, if available
<input type="checkbox"/> 2048 × 1080 minimum pixel dimensions
<input type="checkbox"/> RGB, 8-bit color, not black and white
<input type="checkbox"/> Every file conversion or image re-sampling from the original results in image degradation, so keep conversions to a minimum.

#### ***Content Requirements***

<input type="checkbox"/> Include all team members (if possible) and strive for creativity.
<input type="checkbox"/> For a photograph to be properly credited, the following information shall be included in the file’s metadata or in a text file accompanying the photograph file: <ul style="list-style-type: none"> <li>• Name, phone number, and e-mail of person submitting the photograph</li> <li>• Photograph date and location</li> <li>• Photographer’s name and affiliation.</li> </ul>

### **D-7-c. Construction Photography**

#### ***Format Requirements***

<input type="checkbox"/> Photographs shall be at least 1080 pixels in their shortest dimension and shall be accompanied by a file containing the name and affiliation of the photographer(s) and identification of any individuals visible
--

#### ***Content Requirements***

- |  |
|--|
| <input type="checkbox"/> At least 10 photographs showing construction to-date of the competition prototype |
|--|

### **D-7-d. Team Logo**

The team logo is used by organizers in village signage, the event program, media kit, and Solar Decathlon China Web site.

#### ***Format Requirements***

- |   |
|---|
| <input type="checkbox"/> Submit two versions of your logo: <ul style="list-style-type: none"><li>• One for Web (GIF or JPG, at least 200 px wide). GIF is preferred for simple flat-color logos. JPG is preferred for complex logos.</li><li>• One for print (high-resolution EPS or other vector art).</li></ul> |
|---|

#### ***Content Requirements***

- |  |
|--|
| <input type="checkbox"/> Graphic logo  |
| <input type="checkbox"/> Include a text file containing the following additional information: <ul style="list-style-type: none"><li>• Name, phone number, and e-mail of person submitting the logo</li><li>• A list of all PMS or CMYK numbers used in the logo.</li></ul> |

### **D-7-e. Digital Project Representation**

The teams shall submit updated renderings, photographs, graphics, and/or animations representing the competition prototype design and competition entry for use on the Solar Decathlon China website and in outreach materials generated by the organizers. High quality and varied submissions are expected to lead to greater visibility for the team. This submission can include renderings, photography of scale models or mock-ups, refined graphics, computer-generated walkthroughs, 360-degree virtual tours, or other representations as determined by the team. The organizers will select a subset of submitted documentation for public distribution.

#### ***Format Requirements***

- |  |
|--|
| <input type="checkbox"/> Packaged into a single, zipped file. If elements are hosted online, a link shall be included in the submission.   |
| <input type="checkbox"/> Photographs shall be at least 1080 pixels in their shortest dimension and shall be accompanied by a file containing the name and affiliation of the photographer or graphic creator and identification of any individuals visible   |
| <input type="checkbox"/> Videos, if submitted, shall be widescreen format and accompanied by a document including a verbatim transcript of the audio narrative to meet <a href="#">Section 508 Accessibility</a> standards and identification of the creator and any individuals visible in the video. Closed captioning does not need to be included within the video file. Permission must be provided for any copyrighted content or audio used as part of the video. |

#### ***Content Requirements***

- |  |
|--|
| <input type="checkbox"/> Minimum of five images, with at least one exterior, one interior, and one birds-eye view  |
| <input type="checkbox"/> Photographs shall be at least 1080 pixels in their shortest dimension and shall be accompanied by a file containing the name and affiliation of the photographer or graphic creator and identification of any individuals visible   |
| <input type="checkbox"/> Videos, if submitted, shall be widescreen format and accompanied by a document including a verbatim transcript of the audio narrative to meet Section 508 Accessibility standards and identification of the creator and any individuals visible in the video. Closed captioning does not need to be included within the video file. Permission must be provided for any copyrighted content or audio used as part of the video. |

### **D-7-f. Competition Prototype Graphic Floor Plan**

The graphic floor plan is expected to be posted to the Solar Decathlon China website and used in various communications materials to introduce the public to each competition prototype. The floor plan should be presented in a way to demonstrate the layout of the house, interior furnishings, and all site elements.

#### ***Format Requirements***

- |   |
|---|
| <input type="checkbox"/> Natively-generated vector PDF file |
|---|

#### ***Content Requirements***

- Complete floor plan of competition prototype showing all exterior elements, including landscaping, ramps, decks, and solar envelope and interior elements, including furniture and fixtures

## **D-7-g. Dinner Party Menus and Recipes**

### ***Format Requirements***

- Photographs shall be at least 1080 pixels in their shortest dimension and shall be accompanied by a file containing the name and affiliation of the photographer(s) and identification of any individuals visible

### ***Content Requirements***

- At least 10 photographs showing construction to-date of the competition prototype

## **D-8. Jury Deliverables**

The jury deliverables provide an opportunity for teams to present their projects to each jury prior to arrival on the competition site. The jury deliverables are expected to provide a summary of each team's approach to meeting the contest requirements for each of the juried contests. The narratives may include any combination of text and graphics. The narratives may link to multimedia hosted online, which may be reviewed by jurors as time permits. The narratives will not be made public prior to the release of the respective contest results.

### **D-8-a. Jury Narratives**

#### ***Format Requirements***

- Packaged into a single, bookmarked PDF file for each jury

#### ***Content Requirements***

- Architecture Narrative, including architectural photography of the house (10 pages, maximum + up to 10 photographs)
- Market Potential Narrative, including complete cost estimate<sup>11</sup> (10 pages, maximum + cost estimate)
- Engineering Narrative, including energy model and analysis (10 pages, maximum + energy model analysis & results)
- Communications Narrative, including links to team website and/or social media properties (10 pages, maximum + onsite public exhibit materials)
- Innovation Narrative (10 pages, maximum)
- Water Narrative (10 pages, maximum)

### **D-8-b. As-Built Drawings**

#### ***Format Requirements***

- Packaged into a single, bookmarked PDF document
- Up to 150 pages
- ANSI "D" (22 in. × 34 in.) sheet size

#### ***Content Requirements***

- Complete construction drawings representing the as-built competition prototype house and with sufficient detail for a residential general contractor to build the house without additional input from the team.

### **D-8-c. As-Built Specifications**

#### ***Format Requirements***

- Packaged into a single, bookmarked PDF document, of sufficient detail for a residential general contractor to build the house without additional input from the team.

#### ***Content Requirements***

---

<sup>11</sup> The construction estimate shall be created in accordance with Appendix G.



- |  |
|--|
| <input type="checkbox"/> Construction Specifications |
|--|

## D-8-d. Audiovisual Presentation

### *Format Requirements*

- |   |
|---|
| <input type="checkbox"/> Widescreen, high-definition video file (such as .mov, .mp4, etc.)  |
| <input type="checkbox"/> 3-minute maximum length  |
| <input type="checkbox"/> Accompanied by a document including a verbatim transcript of the audio narrative to meet Section 508 Accessibility standards and identification of the creator and any individuals visible in the video. Closed captioning does not need to be included within the video file. Permission must be provided for any copyrighted content or audio used as part of the video. |

### *Content Requirements*

- |  |
|--|
| <input type="checkbox"/> Must include video footage of the complete constructed house as built prior to the competition  |
| <input type="checkbox"/> May contain still photos and graphics   |
| <input type="checkbox"/> Gives the jurors a realistic preview of what they will experience during the on-site walkthroughs   |
| <input type="checkbox"/> Includes an audio narrative that explains to viewers what they're seeing and describes the underlying philosophy behind the design and team approach to the competition |

## D-9. Final Report

The Final Report shall reflect the results of the team's Solar Decathlon China project. It will be used by the organizers to improve future events and provide lessons-learned opportunities. The final report may be accompanied by a participant survey that shall be completed by all student and faculty team members.

### *Format Requirements*

- |  |
|--|
| <input type="checkbox"/> Packaged into a single PDF file (see Appendix G for PDF formatting and file-naming requirements)                              |
| <input type="checkbox"/> Intent of figures shouldn't be lost if printed in black & white   |
| <input type="checkbox"/> ISO "A4" (210 mm × 297 mm) sheet size   |
| <input type="checkbox"/> 20 pages maximum, including figures, tables, and appendices; cover sheet and table of contents do not count toward page limit |
| <input type="checkbox"/> 11-point body text  |
| <input type="checkbox"/> Maximum 14-point heading text   |
| <input type="checkbox"/> 25mm margins on top, bottom, left, and right  |
| <input type="checkbox"/> Include page numbers and numbered captions for figures and tables for easy navigation through document                        |

### *Content Requirements*

- |  |
|--|
| <input type="checkbox"/> Results of fundraising activities – final quantity of contributions (cash and in-kind); final project budget and accounting; lessons learned – what went well, what didn't, and what you would do differently.  |
| <input type="checkbox"/> Results of media-outreach activities – include statistics.  |
| <input type="checkbox"/> Results of on-site exhibition activities – estimates of the number of visitors to the house (justify estimates); assessment of visitor experiences (include qualitative data); and lessons learned – what went well, what didn't, and what you would do differently.  |
| <input type="checkbox"/> Evaluation of the team's Web site – number of hits, unique visits, and any other user statistics; lessons learned – what went well, what didn't, and what you would do differently.   |
| <input type="checkbox"/> Team perspective on the effectiveness of the organizers' communications efforts with both the teams and the public.   |
| <input type="checkbox"/> Description of future plans for the house, including a statement indicating whether the participating institution(s) would be interested in partnering with SD China to use the house for follow-up collaborative research and outreach projects.   |
| <input type="checkbox"/> Short description of each team officer's future plans for employment, continued study, or other endeavors. SD China requests this information for possible inclusion in publications and presentations describing how the Solar Decathlon China program serves as an effective workforce development and university research project. |

Suggested competition improvements.

Any other information you feel would be helpful to the organizers or future teams.

#### **D-10. Content Requirements for Solar Decathlon China Rules Compliance Check**

<b>Rule #</b>	<b>Rule Description</b>	<b>Content Requirement(s)</b>
<input type="checkbox"/> 4-2	Construction Equipment	Drawing(s) showing the assembly and disassembly sequences and the movement of heavy machinery on the competition site
<input type="checkbox"/> 4-2	Construction Equipment	Specification for heavy machinery
<input type="checkbox"/> 4-2	Construction Power	Construction power will be provided
<input type="checkbox"/> 4-3	Spill Containment	Drawing(s) showing the locations of all equipment, containers, and pipes that will contain liquids at any point during the event
<input type="checkbox"/> 4-3	Spill Containment	Specifications for all equipment, containers, and pipes that will contain liquids at any point during the event
<input type="checkbox"/> 4-4	Lot Conditions	Calculations showing that the structural design remains compliant even if 10 cm of vertical elevation change exists
<input type="checkbox"/> 4-4	Lot Conditions	Drawing(s) showing shimming methods and materials to be used if 10 cm of vertical elevation change exists on the lot
<input type="checkbox"/> 5-2	Solar Envelope Dimensions	Drawing(s) showing the location of all house and site components relative to the solar envelope
<input type="checkbox"/> 5-2	Solar Envelope Dimensions	List of solar envelope exemption requests accompanied by justifications and drawing references
<input type="checkbox"/> 6-1	Structural Design Approval	List of, or marking on, all drawing and project manual sheets that have been or will be stamped by the qualified, licensed design professional in the stamped structural submission; the stamped submission shall consist entirely of sheets that also appear in the drawings and project manual
<input type="checkbox"/> 6-2	Finished	Drawing(s) showing all information needed by the rules officials to measure the finished square footage electronically
<input type="checkbox"/> 6-2	Finished	Drawing(s) showing all movable components that may increase the finished square footage if operated during contest week
<input type="checkbox"/> 6-3	Entrance and Exit Routes	Drawing(s) showing the accessible public tour route
<input type="checkbox"/> 7-1	Placement	Drawing(s) showing the location of all vegetation and, if applicable, the movement of vegetation designed as part of an integrated mobile system
<input type="checkbox"/> 7-2	Watering Restrictions	Drawing(s) showing the layout and operation of greywater irrigation systems
<input type="checkbox"/> 8-2	Batteries	Drawing(s) showing the location(s) and quantity of all primary and secondary batteries and stand-alone, PV-powered devices
<input type="checkbox"/> 8-2	Batteries	Specifications for all primary and secondary batteries and stand-alone, PV-powered devices
<input type="checkbox"/> 8-3	Desiccant Systems	Drawing(s) describing the operation of the desiccant system
<input type="checkbox"/> 8-3	Desiccant Systems	Specifications for desiccant system components
<input type="checkbox"/> 8-4	Village Grid	Completed interconnection application form
<input type="checkbox"/> 8-4	Village Grid	Drawing(s) showing the locations of the photovoltaics, inverter(s), terminal box, meter housing, service equipment, and grounding means
<input type="checkbox"/> 8-4	Village Grid	Specifications for the photovoltaics, inverter(s), terminal box, meter housing, service equipment, and grounding means
<input type="checkbox"/> 8-4	Village Grid	One-line electrical diagram
<input type="checkbox"/> 8-4	Village Grid	Calculation of service/feeder net computed load per NEC 220
<input type="checkbox"/> 8-4	Village Grid	Site plan showing the house, decks, ramps, tour paths, and terminal box
<input type="checkbox"/> 8-4	Village Grid	Elevation(s) showing the meter housing, main utility disconnect, and other service

		equipment
<input type="checkbox"/>	9-1 Container Locations	Drawing(s) showing the location of all liquid containers relative to the finished square footage
<input type="checkbox"/>	9-3 Greywater Reuse	Drawing(s) showing the layout and operation of greywater reuse systems
<input type="checkbox"/>	9-4 Rainwater Collection	Drawing(s) showing the layout and operation of rainwater collection systems
<input type="checkbox"/>	9-6 Thermal Mass	Drawing(s) showing the locations of liquid-based thermal mass systems
<input type="checkbox"/>	9-6 Thermal Mass	Specifications for components of liquid-based thermal mass systems
<input type="checkbox"/>	9-7 Greywater Heat Recovery	Drawing(s) showing the layout and operation of greywater heat recovery systems
<input type="checkbox"/>	9-8 Water Removal	Drawing(s) showing the complete sequence of water consolidation and removal events
<input type="checkbox"/>	9-8 Water Removal	Specifications for the containers from which water will be removed
<input type="checkbox"/>	11-4 Public Exhibit	Interior and exterior plans showing entire accessible tour route
<input type="checkbox"/>	12-1 Construction Cost	Construction specifications including detailed and itemized cost information about the house

## Appendix E Communications Deliverables

### E-1. Web Site

A URL to a preliminary Web site consisting of at least three pages shall be evaluated by communications professionals at the SD China Organizing Committee (SD China OC) to ensure compliance with the minimum Web site coding and accessibility standards provided in this appendix.

Each team shall be notified of required changes they must make to achieve site compliance. As team Web sites meet compliance, SD China OC will link to the sites from the Solar Decathlon China Web site. The Communications Jury will only evaluate sites that are linked to the main Solar Decathlon China Web site.

As significant changes (e.g., new features or a complete redesign) are made to the team Web sites between this deadline and the competition, teams are encouraged to request additional compliance reviews from the SD China OC.

#### *Minimum Web Site Coding and Accessibility Standards*

- All team web sites shall comply with rules 10-2 and 10-3.
- Common elements:
  - A text or graphical link to the Solar Decathlon China home page is provided on the home page in either the header or the footer.
  - At a minimum, an e-mail contact to the Webmaster is provided as a graphical or text link on the home page of the site.
  - Left or top navigation (or both), if used, link correctly; on and off states work correctly and can be skipped by screen readers.
  - Each page has a meaningful and unique <title> tag.
- Page layout:
  - Pages must display correctly (e.g., no horizontal scrolling is necessary to view the full width of the page) in 1024 x 768 resolution (800 x 600 resolution is also acceptable).
  - Page information conveyed with color is also available without color, and foreground and background colors provide sufficient contrast.
  - Headers and footers are consistent throughout the site.
- Directories and files:
  - File names do not contain uppercase letters, spaces, or special characters (e.g., & or \$).
- HTML syntax:
  - HTML syntax follows HTML 4.01 transitional standards or higher and has been validated by the [W3C Validator](#).
  - Row and column headings have been provided for all data tables.
- Links:
  - All links work throughout the site.
  - Links are coded relatively on static pages within the site.
  - Hypertext links used in content throughout the site are underlined to indicate they are links.
- Scripts/applets/dynamic pages (CGI, JavaScript, Java, etc.):
  - Every script works correctly in the standard browser set.
  - Content produced by scripting languages is accessible or has an accessible alternative.
  - Pages requiring applets or plug-ins must provide a link to an accessible page where they can be downloaded.
  - If a timed response is required, the user can request more time to complete an operation.
  - Back button functionality is not impaired.
- Forms:
  - Forms include text labels that correspond with form controls and markup to associate the two.

☐ Graphics:

- All images are stored in a separate subdirectory.
- Graphics have meaningful “alt” tags. (Use empty alt tags for spacer gifs and other unimportant graphics.)
- Alt descriptions are used with all client-side image maps.

☐ Multimedia:

- All
  - All multimedia files are stored in a separate subdirectory.
  - Equivalent alternatives are provided for all multimedia.
  - Pages requiring an applet or plug-in must provide a link to a page where the applet or plug-in can be downloaded.
- QuickTime VR
  - All QuickTime VRs scroll correctly.
  - All QuickTime hotspots link correctly.
- Flash
  - Animation has been tested on a browser without a plug-in downloaded. (Ensure the download process flows smoothly and that the animation works when loaded.)
  - Check all links within Flash animation. If the user exits Flash animation early, ensure that she will go to an appropriate page.
  - Sound works correctly.
  - If Flash is used as an introductory “splash” screen, there is an option provided to skip it.
  - Provide an accessible equivalent to the Flash animation.
- Video
  - All video shall be accompanied by either synchronous captioning or a text version to meet Section 508 Accessibility standards. For information, visit the [“Make Your Videos, Audio Files, Podcasts, and Other Multimedia Section 508 Compliant and Accessible” feature](#) on the [USA.gov Web site](#).

☐ Documents for downloading and printing:

- PDFs
  - All PDFs are stored in a subdirectory labeled “pdfs.”
  - References to PDFs within the HTML document use a consistent format and link scheme throughout the site (e.g., PDF 54 KB).
  - Every page with a PDF link also includes a link to download Adobe Reader (<http://get.adobe.com/reader/>) with the text “[Download Adobe Reader](#).”
- Native file formats
  - Native file format documents are placed in a separate subdirectory, such as a “docs” subdirectory.
  - References to native files within the HTML document will use the following format and link scheme throughout the site: Title of Document ([Software 54 KB](#)). Examples:
    - The Value of Renewables ([MS Word 54 KB](#))
    - The Value of Renewables ([Excel 54 KB](#))
    - The Value of Renewables ([PowerPoint 54 KB](#))

☐ Testing:

- For quality-control testing, test the site in the standard browser set:

***Final Web Site***

The final Web site URL shall be evaluated by the Communications Jury. The Communications Jury shall begin evaluations of team Web sites at the same time that assembly begins at the competition site.

The final Web site shall consist of considerably more content than the preliminary Web site.

## **E-2. Computer-Animated Walkthrough**

Each team shall provide a computer-animated walkthrough of its house for the following purposes:

1. To be included in a compilation video of all Solar Decathlon China 2017 walkthroughs that will be presented to audiences at the 2016 Design Workshop.

- To be posted on the Solar Decathlon China Web site as an introduction to each house.

**Format Requirements**

<input type="checkbox"/> Packaged into a single Quicktime .mov file (1280 × 720 30fps h.264/mp4 high-definition format)
<input type="checkbox"/> Runtime between 3 and 3.5 minutes
<input type="checkbox"/> Shall be accompanied by either synchronous captioning and a text version. For information, visit the <a href="#">“Make Your Videos, Audio Files, Podcasts, and Other Multimedia Section 508 Compliant and Accessible” feature</a> on the <a href="#">USA.gov Web site</a> .
<input type="checkbox"/> Synchronous captioning is always preferred. See the <a href="#">W3C site</a> for more information on synchronous captioning. For an example of a video with synchronous captioning, see the <a href="#">Super Boiler Overview</a> video.
<input type="checkbox"/> If you cannot caption your video, then you must write a text version. Read about <a href="#">how to write text versions</a> . For an example of a text version script, see the <a href="#">Wind Power Animation (Text Version)</a> .
<input type="checkbox"/> If possible, videos should be accompanied by both synchronous captioning and a separate text version of the audio.

**Content Requirements**

<input type="checkbox"/> Composed of animated computer renderings that walk viewers through the house
<input type="checkbox"/> Includes an audio narrative that explains to viewers what they’re seeing and describes the philosophy behind the design
<input type="checkbox"/> Does not include elements that are inherently inaccessible to those with visual disabilities

**E-3. Video Walkthrough**

Each team is required to provide a video walkthrough of its house for the following purposes:

- To be posted on the Solar Decathlon China Web site as an update to the computer-animated walkthrough
- To be evaluated by the Communications Jury.

**Format Requirements**

The format requirements for the video walkthrough are the same as the format requirements for the computer-animated walkthrough (see Appendix E-2).

**Content Requirements**

<input type="checkbox"/> Composed of video footage of the final constructed house
<input type="checkbox"/> Includes an audio narrative that explains to viewers what they’re seeing and describes the philosophy behind the design
<input type="checkbox"/> Does not include elements that are inherently inaccessible to those with visual disabilities

**E-4. Scale Model**

Each team shall build a detailed scale model of its project for display at 2017 Design Workshop.

**Requirements**

<input type="checkbox"/> Teams are responsible for transporting their models to a designated location.
<input type="checkbox"/> The model shall be built at 1:25 scale.
<input type="checkbox"/> The model shall be built on a 1-m.-by-1-m. base. These dimensions are equivalent to the 25-m-by-25-m lot size at 1: 25 scale.
<input type="checkbox"/> In addition to the primary dwelling units, all exterior construction and site components shall be included in the model.

**E-5. Public Exhibit Materials**

All team communications materials at the competition site shall support the goal of Contest 4: Communications, which is to educate consumers about the project and topics relevant to the project.

- Teams shall submit all public exhibit materials to organizers for review. Organizers will determine whether materials meet competition and hosting city guidelines.
- Public exhibit materials shall be evaluated by Communications Jury members.

**Format Requirements**

- |   |
|---|
| <input type="checkbox"/> Packaged into a single, bookmarked PDF file (see Appendix G for PDF formatting and file-naming requirements)   |
| <input type="checkbox"/> Each public exhibit material shall be represented at its full scale within the PDF. Therefore, it is expected that the PDF may contain sheets at several different scales. |

***Content Requirements***

- |   |
|---|
| <input type="checkbox"/> Team handout (shall abide by rules 10-2, 10-3, and 11-4b)  |
| <input type="checkbox"/> Signage (shall abide by rules 10-2, 10-3, and 11-4c)   |
| <input type="checkbox"/> Design of digital displays or other products intended to convey information to the public          |
| <input type="checkbox"/> Team uniform design (shall abide by rule 11-5)   |
| <input type="checkbox"/> Plan drawing of team site depicting public exhibit material locations and tour route at 1:50 scale |

## **Appendix F Health and Safety Plan**

Each team is required to submit a Health and Safety Plan that identifies the following:

- How you will be minimizing risk
- How you will address major hazards that may be encountered during assembly and disassembly activities on the competition site
- How you will control these hazards to prevent injury to team members, volunteers, organizers and the public
- How you will ensure that you are in compliance with applicable regulations.

### **F-1. Plan Development**

A Health and Safety Plan template will be made available and sent to each team by email. The template identifies major topics to address, the level of detail required, performance expectations, and requirements such as minimum levels of training needed for various team positions. The format of your submitted plan can deviate slightly from the recommended template as long as the information and level of detail is equivalent.

You are encouraged to work or consult with your school's environment, safety and health department during the development process. They can be an excellent resource when developing your Health and Safety Plans, while also ensuring that school-specific requirements are addressed.

### **F-2. Required Training**

To ensure a minimum knowledge base regarding health and safety issues during construction activities, the team's project manager, construction manager, and health and safety officer are required to complete the OSHA 30-hour Construction Safety Training course. Proof of course completion for the OSHA 30-hour Construction Safety Training shall be included in the Health and Safety Plan.

### **F-3. Submission and Approval**

Teams are required to submit their Health and Safety Plan to SD China Organizing Committee for acceptance. Once your plan has been accepted, it is your responsibility to make updates if parameters change. For example, if you did not plan to use a crane to place your house when your plan was submitted but later decide that a crane will be necessary, then you are required to update your plan accordingly.

During the event, a current copy of your team's Health and Safety Plan shall be posted on your site. Individuals working on your site shall be briefed on the final, approved plan so they know the expectations regarding safety, hazards, and controls.



## Appendix G Deliverable Submission Instructions

Deliverables are considered to be on time if they are received by the competition official by 5 p.m. China Standard Time (CST) on the respective due date. Refer to the “Deliverables Status Sheet” which will be made available and sent to each team later for deliverable due dates and required file formats for each of the respective deliverables.

### G-1. Web Site URL

Web site URLs shall be e-mailed to the competition official at support@sdchina.org.

### G-2. PDF Requirements

- a. Files submitted as a PDF shall meet the following criteria:
  - (i). Embed all fonts.
  - (ii). Maintain a minimum resolution of 300 dpi.
- b. If an application does not support a direct-to-PDF function, create a postscript file by printing to a postscript printer with the “print to file” option selected. Use this postscript (.ps or .pm) file to create a PDF using Acrobat Distiller’s high-resolution job settings.
  - (i). Creating a PDF from scans, or by outputting the content into a raster image format (.jpg, .tiff, .png, .gif, etc.) and then creating a PDF from the images, is NOT ACCEPTABLE.
  - (ii). All-raster PDFs are large files at 300dpi, are of unacceptable quality at lower resolutions, and are not scalable without degradation.

### G-3. Electronic File-Naming Instructions

The required file-naming convention for all electronic files follows:

[LEADING ORGANIZATION]\_[FILE NAME]\_[SUBMISSION DATE (YYYY-MM-DD)].[EXTENSION]

Examples:

- a. Tongji University Schematic Design Summary  
Tongji University\_Schematic Design Summary\_2016-05-05.jpg
- b. UC Davis exterior rendering submitted separately  
UC Davis\_Exterior Rendering\_2016-05-05.jpg

### G-4. Electronic File Submission Options

All electronic files shall be uploaded to the appropriate Solar Decathlon China Website Submission page.