



*“ACE Mentor Program of Greater Sacramento’s mission is to enlighten and motivate students towards careers in architecture, construction, engineering, related trade services and suppliers. ACE of Greater Sacramento will be a primer network of industry leaders within the community by:*

- *Encouraging growth through student diversity*
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## 2015-2016 Request for Proposal

The ACE Board of Directors is seeking proposals for a community needs project in the community in which your high school resides.

OBJECTIVE: Growth and development are inevitable but they can also be somewhat random, based more on economic interests rather than what makes a great sustainable “community.” We challenge you to examine the “community”, in which your school resides, through a lens of environmental, sociological and economic sustainability. Your tasks for this project are to: 1) research and document what makes a great “community”; 2) investigate and analyze the “community” in which your school resides; 3) propose recommendations and an overall plan to create a “community” center; 4) design or redesign a significant building within your new “community” plan.

The first 3 steps are illustrated in a recent visit and report undertaken by the American Institute of Architects Sustainable Design Assessment Team (SDAT) in the study of the Del Paso Heights neighborhood in Sacramento. This same site also has several other assessments of California and national communities that you may find helpful. <http://www.aia.org/about/initiatives/AIAS075426>. Reference the learning objectives under Appendix A.

Your team will be responsible for developing a project to help energize the community around your school in a similar way as <http://www.ifyoubuilditmovie.com/> affected their community. Also, reference the Living Building Challenge and Living Community Challenge, <http://living-future.org/lbc> and <http://living-future.org/lcc> as information resources on sustainable buildings and sustainable communities.

## PROJECT:

The project will include proposal-level concept for a community needs project. It can be a brand new facility or a remodel of an existing facility. The project can be a senior center, community center, skate park, sports complex, student center, medical center, education facility (not part of your school) or any other project that the team identifies as a need in their community.

Each team will be required to determine what their community needs- this can be through research, interview, surveys or other means. Each team will be required, at a minimum, to meet with a community organization and a city/county official.

The exact program for each facility needs to be created by each team and justified by the team’s research. General guidelines for the project are as follows: the project



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should be between 1,500sf and 10,000sf; include an indoor space and an outdoor space and; include restrooms of appropriate size for the facility’s usage.

The budget is \$200-\$250/sf., as this is a community project that will be funded by community fundraisers, grants and donations.

The team is responsible for creating the program and exact requirements for the project based on their research into the needs of their community. The program, research and justification, and resumes are to be turned in at the mid-year deliverable.

For the final presentation, the team will need to develop the site plan, the floor plan and the 3D look and feel of the building. This can be accomplished through a 3D computer model (such as SketchUp), hand sketching or elevations. Also, the team must develop a construction schedule, construction estimate, submittal for 2 items needed on the project, an estimate and a physical mock up for one system in the building. Lastly, the team shall prepare a group’s choice item- this can be a detailed look at an engineering discipline, a detail construction logistics plan, interior design, full physical model or other item that the team chooses.

#### SITE:

The site shall be within 10 miles of the team’s high school.

#### SCHEDULE:

Reference Appendix B.

#### PROJECT REQUIREMENTS:

1. Reference Appendix C for the score card.
2. A three (3) page narrative providing the rationale for the community needs project. The narrative shall also include the selected project, a summary of the two (2) interviews (1 community group, 1 city/county official) and the program that was developed.
3. Site plan or aerial photo with location of new facility and showing the site’s location relative to the school and plan development to create “community.”
4. 3D design (schematic level) of the Community Needs Project portrayed through exterior renderings or exterior elevations. These can be created by hand or with the use of a computer program.



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5. Floor plans to scale.
6. The group’s choice of a topic to focus on. Topic could be one of the following: structural concept- such as a lateral force-resisting system or preliminary foundation layout; electrical engineering concepts- such as a lighting plan; mechanical system concepts; natural ventilation systems; LEED or Living Building Challenge design elements; acoustical concepts; material choices or another desired area of focus.
7. A physical model (mock-up) of a component of a building system of the group’s choice. Examples include but are not limited to: a drain assembly, welding connection, irrigation portion, mechanical duct connection or fire sprinkler. Use appropriate scale to the item but total size shall not be more than 2’x2’x2’.
8. Detailed estimate for a scope of work incorporated into the new facility. The detailed estimate shall include a minimum of 15 line items, quantities and unit pricing. Each team will only be allowed three lump sum unit prices.
9. A construction schedule.
10. A construction estimate.
11. Submittal for two (2) items.
12. Meeting minutes from each meeting. Reference Appendix D for layout.
13. Résumé for each person on the team. This should be a résumé for you today and can be used for a potential job application.
14. A minimum of two (2) field trips: one will be the Trades Day on 10/10/15 at Plumbers and Pipefitters Center and the remaining may be of team’s choice.
15. Presentation: 50% min. of team must present on stage.
16. Mandatory Trades representative presentation. Construction team mentor to set up a presentation about apprenticeship programs. If help is required in setting this up please contact Travis Brown (916) 847-4022 or Jay Yost (916) 825-7610.
17. Presentation is to be a maximum of 15 minutes.



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## Appendix A

### STUDENT LEARNING OBJECTIVES:

- SLO-1: Demonstrate ability to apply basic organizational and spatial principles to the conception and development of built environments.
- Demonstrate basic abilities using problem solving and design process methodologies to identify problems, analyze criteria and apply learned principles to synthesize solutions to specific design projects; to assess and reflect on the success of the process and solution.
- Demonstrate understanding and the ability to use organization systems, spatial geometry and principles of order (unity, balance, pattern, hierarchy, rhythm, etc,) to create meaning and relationships between elements.
- Demonstrate abilities at: observation; interview; analysis of existing conditions, context, function and image; defining goals and issues; generation of concepts that abstract meaning into built environments.
- SLO-2: Understand and demonstrate the 2D and 3D skills associated with representing envisioned ideas, objects and environments.
- SLO-3: Demonstrate ability to identify and assume diverse roles in the project delivery process that maximize individual talents and to cooperate with other students when working as members of a team to maximize accomplishment.
- Develop a familiarity with design and construction activities in the project delivery process and how the various team members interact to maximize accomplishment.
- SLO-4: Demonstrate knowledge an understanding of historical, cultural, human, aesthetic, environmental and social issues to be able to affect creative change in the built environment.
- Demonstrate an understanding of sustainable environmental design by applying learned principles to create energy and resource-conscious, climate-adapted architectural and site design.
- Demonstrate an awareness of sociological, cultural and urban planning issues by applying learned principles to create livable communities and architecture that support ecological, pedestrian and human environments.



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- SLO-5: To demonstrate ability at research, investigation and the skills associated with life-long learning.
  - SLO-6: Ability at communication, interview, group discussion and oral presentation.

## Appendix B

### SCHEDULE:

10/10/15 – Trades Day

11/13/15 – Last day to submit RFI’s

12/11/15 - Midyear deliverables by 5pm to: [sacramentoca@acementor.org](mailto:sacramentoca@acementor.org)

a. Three (3) page Project Narrative with program.

b. Team Résumés

c. 1<sup>st</sup> half meeting minutes (five meetings & at least one field trip)

4/2/16 – Presentation & Deliverables (hard copy)

d. Project Presentation (location TBD)

1) 50% of team must present on stage

2) 15 minutes maximum

e. Bound Report:

1) Project Narrative

2) 1st half meeting minutes

3) 2nd half meeting minutes (five meetings & remaining field trip)

4/8/16 – Banquet (Holiday Inn)



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## Appendix C

### PROJECT SCORING:

Project Points	0-125	
Meeting Summary 1 <sup>st</sup> half	0-10	(Include Trades Day Summary)
Meeting Summary 2 <sup>nd</sup> half	0-10	(Include Field Trip Summary)
Field Trip Trades Day	0-10	(Percentage of Who Goes)
Field Trip Other	0-5	(Percentage of Who Goes)
Project Narrative (including team resumes)	0-15	
Presentation	0-15	
Site Plan	0-5	
Floor Plan	0-5	
3D design	0-5	
Group’s Choice	0-15	
Physical Mock Up / Model	0-15	
Detailed Estimate	0-5	
Construction Schedule	0-5	
Product Submittals (two)	0-5	



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## Appendix D

### MEETING SUMMARY REQUIREMENTS:

1. Date
2. Location
3. Meeting title
4. Present – mentors
5. Present – students
6. Mentoring Summary
7. Exercise Summary
8. Next Step
9. Pictures