

### **Request for Proposal (RFP)**

(Arterial Collector Design & Feasibility Study: CEEn-2016CPST-008)

### 1. Introduction (Background Information)

- o Arterial Collector Design & Feasibility Study: CEEn-2016CPST-008
- O Bluffdale City Engineering The Engineering Department is responsible for all of the civil infrastructure within the city. This includes the design, planning and construction of improvement projects, as well as infrastructure maintenance, management plan review and engineering construction inspection in private developments.
- Currently, there is only one entrance into The Bluffs Apartments. This project consists of putting in another entrance/exit to these apartments connecting to Loumis Parkway in Bluffdale. The capstone portion of this project is to perform a feasibility study on various roadway alignments. Once the best location is identified, than the capstone team is to perform a preliminary design of the roadway, which will be presented to the Bluffdale City Staff and Council.

### 2. Project Description and Scope of Services

- o Project outline, purpose and objective
  - This project entails the design of an arterial collector road connecting the existing The Bluffs Apartments to Loumis Parkway in Bluffdale, Utah. The location of the road has not been chosen and recommendations will be considered and evaluated based on criteria such as costs, property acquisition, safety, ease of access, and ease of maintenance. There is an existing road that was designed as an emergency access, not for regular vehicle traffic, that will be replaced with this new road. There is approximately 20' of elevation difference between these two areas. This project should produce a preliminary road design that is functional and compliant with safety standards, while minimizing total costs to the city, information to provide a clear understanding of the project
- o Description of requirements
  - All designs shall be according to Bluffdale City code and include any applicable Bluffdale City Standard Drawings.



- o Tasks & expectations
  - A competent team of transportation engineers is required.
  - This project will consist of two deliverables.
    - Feasibility Study: Due February 1st.
    - Preliminary Design of Roadway: Due March 15<sup>th</sup>.
  - Expected meetings & presentations
    - It is expected that there shall be an update given to Bluffdale City Engineering every two weeks on the progress of the project.
    - It is expected that a final presentation be given to the Bluffdale City Council
- Description of customer furnished information such as computer models, data, photos, etc.
  - Bluffdale City Engineering will provide LIDAR imagery data for the project area.
- o Final product must meet or exceed project criteria described above.

#### 3. Outcome and Performance Standards

Our student team will provide the work for this Capstone project "as is". Our results cannot be construed as work provided by licensed professionals and cannot be used as "stamped deliverables" without first being reviewed, approved and stamped by a qualified licensed professional engineer.

#### 4. Deliverables

- Deliverable specifications
  - Feasibility Study: A report recommending an alignment alternative based on total project cost, vehicle and pedestrian safety, and construction feasibility.
  - Preliminary Design of Roadway: Drawings showing the design of roadway.
- Minimum required deliverables
  - Short monthly status reports documenting challenges, solutions & progress
  - A final report with design alternatives for the project that include economic and environmental considerations
  - A poster reflecting a summary of your project to be presented to student, faculty and other interested individuals in the final undergraduate seminar
  - A presentation summarizing your project to be presented to your sponsor
- o Before the end of winter semester both a presentation to sponsors and poster session for students, faculty and other interested people will be organized.



o All deliverables are tentatively due Monday April 10th.

#### 5. Contractual Terms and Conditions

- Contract type: Non-monetary compensation with all project work on a "best effort" basis
- Term: Team members are to spend 8 hours/week/student with at least 3 hours/week working together. Class time or time spent on class assignments counts toward these hours.
- Each project team consists of
  - A project manager/mentor: A graduate student who does not perform technical work on the project. He/she guides, facilitates and directs the team toward successful completion of the project by achieving customer objectives, adhering to schedule/time/cost, and promoting team unity.
  - A project team lead: An undergraduate student team member who serves as the team's spokesperson and liaison among the team, its project manager, sponsor, faculty advisor and Capstone Committee advisors
  - Two project team members/task leads who may be assigned to take lead on certain aspects of the project in addition to the project team lead. All team members, including project team lead, are to assist one another on each member's specific task assignments.
    - One can take lead on analysis or data gathering, another on design/drawings, data interpretations etc.
- O Customer/sponsor may require team members to sign a <u>non-disclosure</u> agreement that simply states the work you do belongs to the project sponsor.

### **6. Payments, Incentives and Penalties**

- Project work to be graded by graduate student mentors/project managers with potential additional inputs from sponsors, Capstone Committee members and faculty advisors
- o Grading criteria
  - Team work and unity
  - Project proposal
  - Project Management Plan (PMP)



- Monthly status report
- Final report, poster, and presentation
- Customer satisfaction in satisfying project objectives and required deliverables

### 7. Submittal Requirements for the Proposal

- o RFP availability: TBD
- o Proposal deadline: Monday, October 31, 2016 at 4:00 pm MDT
  - Three copies of proposals in accordance with guidelines & formats specified in the proposal template (to be available by Monday 10/17/2016)
- Minimum requirements for the proposal (each section must start on a new page. Details and formats will be provided in the standardize proposal template)
  - Cover page
  - Letter of submittal / introduction
  - Executive summary (one page or less)
  - Work plan
    - Proposed approach, including innovative ideas, to complete the project
    - Weekly project work schedule for individual team members
    - Weekly team work/meeting schedule
  - Section identifying necessary tools, data, equipment, etc. with brief explanations
  - Project schedule including important milestones
  - Engineering budget: Estimated hours for each phase/element of the proposed work plan
  - Outcome and Performance Standards
  - List of outside consultants (faculty, Capstone Committee member etc.) necessary for this project
  - Statement of qualifications
    - Background, experience, education and organizational structure of the team
    - Team member assignments
    - Team member collaboration plan: (How will team work together seamlessly)
  - Appendices
    - Appendix A: 1 page resume for each team member
    - Appendix B, C, etc. as necessary



 Review committee reserves the right to reject any proposal or presentation that is not submitted in a timely fashion or in accordance with instructions and requirements in this RFP

#### 8. Contacts

- Shaun Hilton (Graduate Student Mentor/Project Manager) 702-630-2971, shaunthilton@gmail.com
- o Dan Tracer (EIT Bluffdale City) 801-559-7782, dtracer@bluffdale.com

### 9. Proposal Evaluation Criteria

o Proposal will be evaluated by graduate student mentor/project manager in accordance with the following rubric, with inputs from project sponsor, Capstone Committee member and potentially faculty advisor.



Timeliness - 1 pt off per full hour late, up to 5.  Grammar/Spelling - 1 pt off per blatant error, up to 5.  Cover Page - Title, Data, Sponsor, Team Name, Team Members, Department of Civil & Environmental Engineering, Ira A. Fulton College of Engineering and Technology, Brigham Young University - 1 pt per piece of information included.  Cover Letter - brief letter of introduction that 1) states your intent to propose and 2) how you may be contacted.  Executive Summary 3/4 to 1 page that summarizes the contents of your proposal  Team Abilities Summary as a team of 1) relevant courses and experience, 2) abilities to complete the work on time and in a professional manner, 3) including use of specific engineering tools/software. Include résumés.  Key Personnel - 1) Identify which individuals will focus on which pieces of your potential tasks, and 2) some kind of organizational chart or visual describing how you will work together as a team.  Project Understanding - 1) Did they address specific items mentioned in the RFP? 2) Do they repeat basic background in somewhat new terms to	
Cover Page - Title, Data, Sponsor, Team Name, Team Members, Department of Civil & Environmental Engineering, Ira A. Fulton College of Engineering and Technology, Brigham Young University - 1 pt per piece of information included.  Cover Letter - brief letter of introduction that 1) states your intent to propose and 2) how you may be contacted.  Executive Summary 3/4 to 1 page that summarizes the contents of your proposal  Team Abilities Summary as a team of 1) relevant courses and experience, 2) abilities to complete the work on time and in a professional manner, 3) including use of specific engineering tools/software. Include résumés.  Key Personnel - 1) Identify which individuals will focus on which pieces of your potential tasks, and 2) some kind of organizational chart or visual describing how you will work together as a team.  Project Understanding - 1) Did they address specific items mentioned in the	
of Civil & Environmental Engineering, Ira A. Fulton College of Engineering and Technology, Brigham Young University - 1 pt per piece of information included.  Cover Letter - brief letter of introduction that 1) states your intent to propose and 2) how you may be contacted.  Executive Summary 3/4 to 1 page that summarizes the contents of your proposal  Team Abilities Summary as a team of 1) relevant courses and experience, 2) abilities to complete the work on time and in a professional manner, 3) including use of specific engineering tools/software. Include résumés.  Key Personnel - 1) Identify which individuals will focus on which pieces of your potential tasks, and 2) some kind of organizational chart or visual describing how you will work together as a team.  Project Understanding - 1) Did they address specific items mentioned in the	
Executive Summary 3/4 to 1 page that summarizes the contents of your proposal  Team Abilities Summary as a team of 1) relevant courses and experience, 2) abilities to complete the work on time and in a professional manner, 3) including use of specific engineering tools/software. Include résumés.  Key Personnel - 1) Identify which individuals will focus on which pieces of your potential tasks, and 2) some kind of organizational chart or visual describing how you will work together as a team.  Project Understanding - 1) Did they address specific items mentioned in the	
Team Abilities Summary as a team of 1) relevant courses and experience, 2) abilities to complete the work on time and in a professional manner, 3) including use of specific engineering tools/software. Include résumés.  Key Personnel - 1) Identify which individuals will focus on which pieces of your potential tasks, and 2) some kind of organizational chart or visual describing how you will work together as a team.  Project Understanding - 1) Did they address specific items mentioned in the	
abilities to complete the work on time and in a professional manner, 3) including use of specific engineering tools/software. Include résumés.  Key Personnel - 1) Identify which individuals will focus on which pieces of your potential tasks, and 2) some kind of organizational chart or visual describing how you will work together as a team.  Project Understanding - 1) Did they address specific items mentioned in the	
potential tasks, and 2) some kind of organizational chart or visual describing how you will work together as a team.  Project Understanding - 1) Did they address specific items mentioned in the	
demonstrate their understanding of the project? 3) Do they mention key deliverables they may need to provide? 4) Did they articulate a specific approach for developing design alternatives and deliverables? 6 pts max per piece.	
Formatting - Does it look professional? Consistent? 6	
Concise vs. Wordy, Meaningful vs. Fluffy, repetitive wording. 6 pts means concise, and accurate, and specific. 1 pt means often confusing, wordy, or vague.	
Clear and professional flow of writing and style. 6 pts means that you would feel comfortable handing this in if it were your own; it is easy to read and understand; feels professional; 1 pt means it feels like it was cut-pasted, rushed, and done with little thought; hard to read; feels like a high school essay.	
Total 100	)