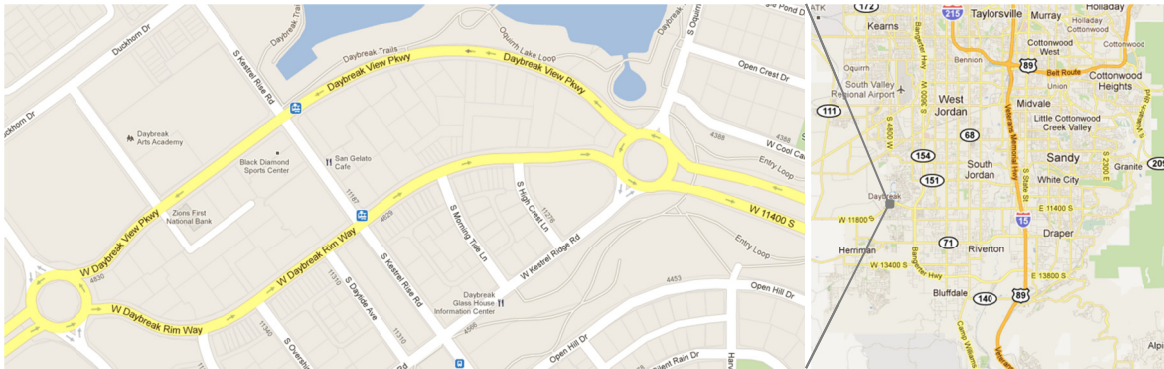


SPEED/WARRANT ANALYSIS OF DAYBREAK PARKWAY COUPLET



STATEMENT OF PURPOSE

Prepare a speed / warrant analysis of the Daybreak Parkway Couplet located at 4700 West and Daybreak Parkway in South Jordan, Utah. The couplet is comprised of two, separated, one way sections of the Daybreak Parkway arterial with a roundabout at each end. The sponsor needs to maximize commercial access including parking, improve pedestrian safety, and meet agency standards. It is your task to review the signing, striping and signalization of the Kestrel Rise Road crossing, identify deficiencies and improvements, prepare several alternatives, consult with the sponsor and prepare design drawings for the selected alternative. This study may require speed and volume analysis and/or other studies.

BACKGROUND INFORMATION

Kennecott Land is part of the global Rio Tinto company. It employs about It's a big company that employs 2,400 people in Utah and 65,000 around the world. Rio Tinto has owned and operated the Bingham Canyon Mine since 1989 and more recently the Daybreak community.

“Kennecott Land’s goal is to build enduring communities on Salt Lake Valley’s West Bench – places that enhance quality of life and respect the natural environment. We are already doing this at Daybreak where more than 2,000 families call this great neighborhood home. Located in the beautiful city of South Jordan at the foot of the Oquirrh Mountains, Daybreak is just the beginning of our vision.” (kennecottland.com/daybreak/)

Kennecott Land not only oversees the building of quality homes but they also work with the Jordan School District to provide quality schools, they plan retail areas and office parks and are working with the communities to develop extensive trail systems to connect all that Daybreak has to offer. Their hope is to build a sustainable community that can “preserve the environment and the quality of life for today’s resident and for generations to come.” (kennecottland.com/daybreak/)

SCOPE OF WORK

The current speed along Daybreak View Parkway and Daybreak Rim Way is 25mph. Police began using it as a speed trap and drivers contested the tickets, claiming that they were within the 85th percentile of drivers. A judge has ruled in their favor and overturned the speeding tickets. Kennecott wants to devise a plan to reduce the 85th percentile speeds along the Daybreak arterial to not only help drivers comply with the law but increase pedestrian safety. Kennecott Land also

needs to maximize commercial access including parking, improve pedestrian safety, and meet agency standards.

Kennecott Land should provide CAD drawing of the current street layout and striping. Kennecott Land needs students to prepare several alternatives to the current signing, striping, and signalization of the Kestrel Rise Road crossing to reduce speeds. This will require traffic counts, pedestrian counts, and a speed warrant analysis. Students will need to prepare design drawings for the selected alternatives. Students should also prepare a cost comparison for the proposed alternatives.

Kennecott Land is actively working with an engineering firm on a solution to the problem. They would like students to perform before and after traffic counts, pedestrian counts, and speed analysis to compare with the engineering firm's finding and determine the effectiveness of the implemented solution.

Daybreak Parkway Couplet is located at 4700 West and Daybreak Parkway in South Jordan, Utah. The couplet is comprised of two, separated, one way sections of the Daybreak Parkway arterial with a roundabout at each end. Kestrel Rise Road crosses both one ways sections of the Daybreak Parkway arterial. Site visits will be necessary in order to complete the required traffic counts and observations.

REQUIREMENT FOR PROPOSAL PREPARATION

Turn in three copies of the proposal that should include:

Cover letter

Executive Summary (1 page or less)

Statement of Qualifications (2 pages or less)

- Should outline the background, experience, education, and organizational structure of the team. This section should include some discussion of how you plan to become a "high functioning" team in the course of completing the project. Any outside consultants (professors or others) that will help should also be included.

Work Plan (2 pages or less)

- Should outlines the approach to solving the problem, how your team will work together (including weekly work schedule that shows the hours each will work and the time block the team will be together)

Necessary Tools, Data, Equipment (1page or less / probably a few lines)

- Should be thorough but not excessive

Schedule (1page or less)

- Indicating important milestones

Engineering Design Budget (1page or less)

- No more than 1 page Engineering Design Budget that would be primarily their time and effort.

Resumes (1 page for each team member)

- Include resumes in the appendix. The resumes should describe education and experience pertinent to this project and not a general job fair resume.

OUTCOME AND PERFORMANCE STANDARDS

You will provide this work "as is" meaning that there is no engineering stamp certifying the work. However, our ability to continue receiving help from outside sponsors will be contingent on the good work that you do. You represent the BYU Civil & Environmental Engineering Department and it is expected that you will interact in a professional manner at all times with your mentor and project sponsor, treating them with the utmost respect and consideration of their busy schedules.

While successful completion of the design project is fundamental to the outcome of the work, it is expected that you will also learn important team dynamics and leadership principles. This means that in the process of completing the project you are also seeking to help each member of your team grow and develop confidence in his/her engineering abilities.

DELIVERABLES

Final Report

- Should include design alternatives for the Daybreak Parkway Couplet project that include economic and environmental considerations. Should also include traffic counts, pedestrian counts, and speed warrant analysis.

Poster

- Should summarize your design project.

Presentation

- Should summarize your design project.

All deliverables will be due Friday April 1. During the week of April 4th both a presentation to sponsors and a poster session for students, faculty and other interested people will be organized.

TERM OF CONTRACT

Students will complete the required work during the winter semester, six hours/week/student with at least 3 hours working together as a group. The project will be completed by the previously specified deadline.

PAYMENTS, INCENTIVES, AND PENALTIES

For your effort on the performance of this project you will receive a grade that is awarded according to the following breakdown:

- 10% Time Card (putting in the requisite time)
- 10% Project Notebook (demonstrating productivity in the hours spent)
- 20% Milestones Met (each project will outline the expectations for milestones)
- 35% Final Report
- 10% Poster/Presentation
- 10% Teamwork Portfolio and Peer Evaluation
- 5% Cooperation

CONTRACTUAL TERMS AND CONDITIONS

There will be no monetary compensation with respect to the work completed, and all work is completed and delivered on a "best effort" basis.

Each member of your team will be asked to sign a [non-disclosure agreement](#) that simply states the work you do belongs to the project sponsor.

EVALUATION AND AWARD PROCESS

Your team's proposal will be evaluated by a panel of three graduate students.

- 20% Firm Resources/Ability/Experience
- 20% Key Project Personnel
 - Transportation Engineering Emphasis
- 40% Work Plan and Understanding of the Project
- 20% Technical Proposal and Presentation

PROCESS SCHEDULE

Oct 31, 4:00 pm - Request for Proposals will be available online at <http://cecapstone.groups.et.byu.net/Winter2012.htm>

Nov 7, 4:50 pm - Question and Answer period with respect to the proposal and submission procedures

*Nov 21, 4:00 pm - Three copies of the proposal must be submitted at the beginning of class

*Nov 21, 4:00-5:30 pm - 5 minute interview (presentation) by your team of the proposal

Nov 30 - Award Notification

*The review committee reserves the right to reject any proposal or presentation that is not submitted in a timely fashion or in accordance with the instructions given in this RFP.

CONTACTS

Feel free to contact me, preferably by email, with any questions and information regarding the RFP.

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