Project Status Report: CEEn-2018CPST-013 **Report Date: Mar 25, 2019**

Team Members: Craig Staples, Alec Escamilla, Paul Andersen

Project Title: Springville Performance Evaluation & Pavement Design for Minor Collectors

1) Summary of technical/non-technical challenges encountered

Our first challenge this past week were to schedule a time for material sampling that would align with good weather conditions, and with our team and Dr. Guthrie's schedules.

Additionally our team has two spreadsheet challenges to overcome. The first is the mechanistic-empirical analysis spreadsheet. The first design that we had envisioned for a CTB sub base was proving insufficient based on our current method of calculations.

The second spreadsheet challenge was in our ESAL estimation spreadsheet. We needed to provide estimations for the lifetime ESALs for each street according to their actual construction date.

2) Team approaches & resolutions to overcome challenges

Our approach to these problems was the following:

1. We scheduled Blue Stakes to id any utilities in the areas we want to take cores from. All utilities have been marked and our team can now plan a time within the next 14 days to collect these samples.
2. At the recommendation of our faculty advisor we are conducting a literature review in order to determine if our methodologies for calculating the number of ESALs to failure for CTB is in fact correct, or if it is outdated.
3. Our team reworked the ESAL estimating spreadsheet so that the ESALs are computed based on each pavement's respective lifespan.

3) Status of challenge resolutions & potential project impact

This week we must get out and collect samples so that we will have time to perform the laboratory tests before our report is due. We have planned to go out this week and barring below freezing temperatures we believe this will be completed before the week's end.

So far our literature review has not yielded telling insights into our MEP analysis. We will continue to explore the research performed in this area and if necessary we will adjust our final design recommendations to the city based on our previously completed calculations.

4) Project status & summary

With little time remaining before our presentation our team still has much work to do. The report, poster, and presentation remain to be completed. We are looking forward to this portion of the project so that we can report on the value our team's project will add to Springville City.

With the completion of this week's field work we will move through the bottlenecking portion of the project. Our team will then be free to move as quickly as we are able to perform lab tests, synthesize our final design, compile our report, and prepare for our final presentation.

Please enter # of hours spent on project this last week for each team member in the order listed above

Craig Staples: 2.75 **Alec Escamilla:** 7 **Paul Andersen:** 3