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FELSBURG HOLT & ULLEVIG

TRANSPORTATION ENGINEERING

MATC INTERN REPORT

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An intern by definition is a person who works as an apprentice or trainee in an occupation or profession to gain practical experience. Interning at Felsburg Holt & Ullevig (FHU) has really allowed me to have that hands-on, real life experience and taught me a lot about what it means to be an engineer. Working this summer I have performed countless transportation engineering tasks, built lasting relationships, and solidified my decision to choose civil engineering as my career path.

FHU has been a great environment for me to learn and develop my engineering skills. FHU is a consulting firm that specializes in all types of transportation engineering as well as environmental services. The firm currently has over 90+ employees and four offices. The main office is located in Centennial, Colorado, and there are three regional offices that lie in Colorado Springs, Colorado; and Omaha and Lincoln, Nebraska. The Omaha/Lincoln group is 11 people strong and this smaller office setting allowed me to work side by side with senior level engineers and take part in studies, design, and marketing. I was able to really see the business from the top to the bottom.

Over the summer I have worked on projects ranging from transportation to environmental and completed tasks that were both large and small. My project list includes traffic impact analyses, corridor studies, traffic studies, mobility studies, and one-way to two-way street conversions. I have also prepared invoices, compiled reports and proposals, set up mailers, coordinated lunch-and-learns and designed graphics. My work on the computer has involved programs such as SYNCHO 7, Adobe Illustrator CS3, Microstation, AutoCAD, HCS 7, CORSIM, SIDRA Intersection 4.0, and Google Sketch-up. These programs are vital tools and my experience with them will be valuable in my transportation engineering career.



The main project I have worked on this summer is a traffic study for expansion of Westbound I-80 in Omaha. The expansion project begins at the existing I-80 / I-480 / US 75 interchange (Kennedy Freeway) and includes the 42nd Street and 60th Street interchanges. Our client for this job was the Nebraska Department of Roads (NDOR). I was responsible for helping set up the CORSIM and SYNCHRO models using existing traffic data from NDOR. Forecasting data for our design year was also given to us by NDOR. I took all the results created by the two previously mentioned programs and created operations schematics and report graphics.

Another project that I worked on was a project for JEO and the City of Wahoo. NDOR is constructing a bypass around Wahoo, the Highway 77 Expressway, so FHU was asked to do a traffic study to determine the recommended lane configuration and cross section

for the improvements to Chestnut Street and 23rd Street. The traffic study incorporated anticipated traffic volumes from existing developments within the study area and potential development as designated in the 2009 Wahoo Comprehensive Development Plan. The study is ongoing and should be completed by the end of August 2010.

Along with the transportation engineering knowledge I have gained, I have also broadened my understanding of environmental engineering as well. Our environmental team was hired by the City on Omaha to perform Industrial Stormwater (ISW) inspection on facilities throughout the city. It was my job to set up the forms and inspection documentation so our environmental staff would be prepared to carry out the inspections. I was also responsible for putting together photo logs for the ISW inspections and our MS4 Good Housekeeping assistance to the City of Omaha. This involved taking photos of the inspection sites and providing detailed descriptions of what each photo is depicting.



One of the most rewarding parts of this summer was when my resume was used in a proposal for a Safe Routes to School (SRTS) project in Norfolk, NE (see attachment for resume). Since this is my hometown, my coworkers thought it would be a good idea to put my information in as part of the submitting package. After being shortlisted, an interview, and a couple days of waiting, FHU found out we won the project. I believe we won because of my hometown ties or it could have been the company's years of experience with this project type too. Either way it was a good win for the company and an achievement for me.

Interning at FHU has given me a glimpse of what it means to be a transportation engineer and reinforced my decision to pursue transportation as my career path. It has been a perfect environment for me to work, learn, and build relationships not only with my coworkers, but clients as well. Everyone in the FHU office was helpful, kind, and friendly and I have many lasting memories to take away from this summer. More importantly, I was given the chance to develop the real-life skills needed to become a transportation engineer and an employee that brings value to a job. I am grateful for the opportunity, and would like to thank FHU and MATC for this experience.