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2007 MATC Internship Report



Mid-America Transportation Center

As an engineering student, I wanted to gain knowledge and experience outside of what I had learned in the classroom. The MATC internship program gave me the opportunity to see the diversity of transportation engineering and gain the experience that can only come from working in the engineering field. As an intern at the Mid-America Transportation Center I was able to learn software programs, work on a variety of research projects, and gain valuable skills, knowledge, and experience.

When I started my internship, I hoped to learn software programs that would help me in my future career. It was not long before I started to learn to use MicroStation. I began with some simple 2D drawings and soon thereafter was assigned to do more complex 3D modeling. I made 3D models of two different school buses that would eventually be placed in MicroStation files of roadways and used to identify what drivers could see on the road. Throughout the summer, many of the projects and tasks that I worked on involved MicroStation and I was able to develop a more thorough knowledge of the program as I worked on the projects. Previously, I had some experience with AutoCAD, but learning and working extensively with a different CAD program that is widely used in transportation engineering will be a great advantage.

One of the main projects I worked on was a research project involving offset right turn lanes and their benefit for increased sight distance. Working on the offset right turn lane project required spending time outside the office collecting data at different locations in and around Lincoln. Data collection for this project included traffic counts, measurements, surveying, and video recording. In addition to collecting and recording data, I also contributed numerous MicroStation drawings and sight triangle calculations to help determine sight distance of drivers from different vehicle positions at different

intersections. Working on this project made me better understand research methods and realize how extensive the work is that goes into a research project.

While the offset right turn lane project was a main project for me, working at MATC provided the benefit of working on a variety of projects and assignments throughout the summer. The diversity in my work kept it interesting and prevented me from getting burned out on any one project. Working on multiple tasks during the summer also gave me a chance to learn about various aspects of transportation research and education as well as allowing me to further develop skills in multiple areas such as technical writing and CAD modeling.

The greatest thing I have gained from the variety of work I have done as a MATC intern is experience and knowledge. Not only did I learn new things such as software programs and data collection techniques, but I also used and expanded my understanding of things I had learned in classes. Through writing instruction manuals for use by future MATC workers, I was able to use and sharpen the skills I had learned in a technical writing class. I used what I had learned in surveying class to aid in data collection for different research projects and I built on sight distance calculations I had learned the previous semester by performing similar calculations for the offset right turn lane project. Working with graduate students on some of these projects also provided a good experience of working and communicating with peers and learning more about what graduate school is like.

Over the summer, I did gain the experience outside the classroom that I was looking for. However, I also came to realize the importance of some of the things I am learning in my classes and how they are applied in the workplace and in the area of

transportation engineering. Learning software programs, working on research projects, and gaining knowledge and experience as a MATC intern has given me an advantage for the future. I hope to build on what I learned during the summer and use the experience I gained to begin a career in transportation engineering.