



My Mid-America
Transportation Center
Internship



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This summer, I worked as an intern for the Nebraska Transportation Center, the transportation research company under the Civil Engineering department of the University of Nebraska-Lincoln. Prior to this opportunity, I worked for the NTC during the school year, at the Army Corps of Engineers in Virginia, and for the Nebraska Department of Roads in the interstate design section. In these previous internships, I did not have the chance to pursue research in the academic sense, and I was excited at the prospect. Now that the summer is wrapping up, I can confidently say my internship has led me closer to a transportation engineering career and perhaps a graduate degree to continue transportation research.

In my previous internships, my work had a public works focus, specifically the design of public roads and military installations. Although I enjoyed these tasks, I wanted to pursue a more research-based internship in order to see the side of universities that I would not be exposed to in class. At the NTC, I was able to pursue this goal.

During my internship, I performed numerous field studies on a variety of installations. A few of these studies involved multi-lane roundabouts in residential and business applications, acceleration ramps along high speed multi-lane roadways such as the interstate, and offset right-turn lanes to improve intersection sight distance. Following these field studies, I had to come back to the office and analyze the data, utilizing a blend of computer programs including Microstation, the Microsoft Office suite, and Windows Movie Maker. After compiling this data, I could now present a view of the data that minimized hours of videotape into detailed statistics and clips showing driver behavior.

This internship also taught me that mistakes and accidents are a part of any job, and that you must learn from your mistakes to prevent any further accidents. During a field study on staggered stop lines at an intersection in Lincoln, one of my coworkers was in the truck, parked on the street, watching a camera. As he continued to monitor the study, a vehicle came by the truck and knocked off the driver's side mirror. Luckily, the mirror could be fixed rather easily and we had the driver on videotape because he continued to drive through the intersection. We learned to fold in the mirrors during studies along roads. In another instance, we were attempting to park alongside I-80 east of the Highway 370 interchange, and proceeded to get the truck stuck in a rut in an effort to stay out of the way of the heavy interstate traffic. Eventually, we pushed the truck from the rut and ended up in a patch of slick mud, which we were unable to get the truck out of. Instead of a further attempt to remove the truck from the mud and risking damage, I called a towing company to pull us to the paved shoulder. After that occurrence, I've learned to always keep two tires on the pavement. Although these accidents were troubling at the time, whenever we go out on field studies we are sure to joke about these mistakes and think to be extra careful with equipment and our own safety.

In addition to field studies, I also performed numerous tasks. I assisted with updating the surveying field exercises for the summer Geometric Control Systems class, due to the construction on 16th Street near the engineering complex. Through this work, I had time to make surveying familiar again and to learn how to use the equipment confidently. I also assisted with compiling class notes and learning about the preparation that professors go through for their classes. Another task was creating a

three-dimensional design car in Microstation for Spanish standards to apply research from another country to AASHTO standards. Data compiling and analysis was also a large portion of my internship, and I performed data analysis from studies that I worked on, in addition to other projects.

This summer has opened my eyes further to transportation engineering, and I have learned about its different facets. I enjoyed my opportunity to continue studying this branch of civil engineering, and gain a new perspective from a research point of view. I hope to continue my career in transportation engineering, and the experience I have gained during this summer will be extremely valuable to my future academic and professional career.