

Construction Inspection Internship

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The summer of 2014 has been more enlightening than the sum total of the rest of my summers thus far. Taking part in my first internship was daunting, but the friendly work environment, helpful mentors, and wealth of knowledge shared from other interns helped ease the transition. My internship started slow during the school year. I worked for only 14 hours a week while I was in class full time, but this slow start helped me pick up the finer points of city work. Once summer hit, some of the contracts for the summer had some complications, so I ended up bouncing around from project to project for a while. It seemed like my experience was going quite differently than that of the usual intern, and it turns out it was. However, this turned out to be a blessing in disguise because I was able to see almost every aspect of city work in two to three week increments. This let me experience so many aspects of civil engineering which I would never have been exposed to if I was stuck on one single project. The most interesting period of these projects were the weeks I spent on the Old Cheney rehabilitation, the Lincoln airport entryway/ cornhusker highway rehabilitation, and the 2014 residential rehabilitation.

The first major project I worked on was the Old Cheney rehabilitation. While on this project I was in charge of the major retaining wall that ran along the south side of the street as well as overseeing new water main laying and compacting. I quickly learned the importance of having an inspector on site at all times because there is an incredible amount of discrepancy in the plans that the city draws up and the plans of the contractor. For example, the second day we noticed the multi-ton retaining wall blocks were not lining up correctly even though it seemed like the construction workers placing the blocks were doing so according to the plans. As it turns out, the type of block was changed in the city plans but not in the contractors, so the original blocks which had a 4" step back built in were now sheer block faces. To counter this we had the blocks set back either 2" for a half block or 4" for a whole block. While the blocks still looked a bit strange, the new layout accounted for the step back and solved our problem with the plans. This was the first big lesson I learned as an intern. Planning vigorously only gets so far, there will

always be unexpected problems and unforeseen occurrences that are impossible to account for, so the adding allowance that I learned about in many of my engineering classes at the University is actually one of the most important aspects in engineering. Although I previously thought it was one of the least crucial elements, I now understand why it is preached over and over again.

The second project I worked on was the Lincoln airport entryway/Cornhusker highway project. Here, the most important piece of information I acquired was working in the public eye. With thousands of cars constantly cruising the highway it becomes necessary to take into account not only the safety of the drivers and workers, but also the manner in which you conduct business. When working on Old Cheney, the entire two mile stretch was completely shut down so there was little risk of civilian complaints on the site. However, with this project, every day the project manager would receive calls both praising and criticizing the work on the road, because only one lane could be closed at a time. This also meant there had to be weekly, sometimes biweekly meetings, to discuss exactly what was taking place and how to improve the work conduct to make sure the public was happy with the way the construction was taking place. One thing that tends to get overlooked in school is how to deal with the public, especially in engineering. I think this would be a good addition because without this experience I would have been extremely unprepared for any type of job taking place in close proximity to the masses.

The last major project I worked on was residential rehabilitation and sidewalk contracts. This is where I spent most of my time, and while at times it was not as exciting as either of the other two jobs, I still had a lot to learn. What I took away from my time on these projects was that safety on smaller construction sites becomes increasingly prudent. Many times, if the proper safety barriers aren't in place, people may not even notice a certain section has been recently worked on and might contaminate the work. An example of this is a biker riding though

wet cement. While it seems like it would be clear where a pour just took place if the workers have moved on down the road, it can actually be difficult to tell. I personally witnessed this happen on one of these projects, and while the biker wasn't injured, it could have easily turned out differently. To combat incidences like this, it is essential to put up proper "closed" signs (both road and sidewalk) and set caution cones at every recently worked on site. Without having seen this, I would have thought it wasn't that important, but I now realize safety really does come first.

My time as an intern for the City of Lincoln has been an enlightening one (it certainly beats the mind numbing time I spent at Walmart last summer). With all of the valuable information and experience I will take away from this summer I know I will be far better prepared when doing any type of engineering in the future. From field changes to plans, working in the public eye to ensuring the safety of all citizens while construction is taking place, all aspects will go in to any design I work on in the future.