

WELD COUNTY ENGINEERING INTERN PROGRAM

My internship at Weld County Public Works gave me the opportunity to participate in various aspects of work that the county is challenged with. The different experiences I was involved in include land surveying, planning and development, project managing, engineering design, and construction inspection. The experience I gained from the variety of tasks I completed helped me to understand how the integral disciplines work together to formulate a final project.

I began the summer working with the survey crew. We utilized total station surveying as well as the global positioning system. I learned about the history of land surveying and the importance of accuracy and documentation. The surveyors and I spent time tying out and documenting section corner monuments that were restored or rehabilitated by Weld County using the Colorado Land Survey Monument Record. Utilizing our field work, I learned how to create topographic maps in which I could calculate areas and volumes by means of Eagle Point and AutoCAD. From these maps, I created three plans for a 110 gravel permit application for Ashbaugh Gravel Pit and two conceptual design plans for an intersection located at WCR 20.5 and 1.

The second position in which I worked was with the planning and development staff. Here I was introduced to the process of development approval starting at sketch plans, moving to change of zone, and ending in the final plats. I learned how to review this process to ensure that the Weld County development standards were met. These standards included sufficient right-of-way, road geometry standards, road improvement agreements, drainage reports, and geotechnical reports. Under this supervision I attended several meetings discussing planning and development in Weld County such as the Planning Commissioning meeting and the Board of County Commissioners meeting.

Another position in which I gained experience in was engineering management. I learned about the complexity of the budget and scheduling. I also learned a lot about how the county government operates and is managed. I was informed about the challenges that the engineering manager faces on a daily basis and how these challenges are resolved. Throughout the summer I attended project manager meetings and staff meetings on a weekly or bi-weekly basis. Budget, scheduling, staff reports, project progress and concerns are some of the topics discussed at these meetings.

Over the course of the summer I visited several construction sites for inspection under the supervision of Weld County employees. I was able to see different stages of construction from beginning surveying through a finished project. Road, bridge, and utility construction were among the field sites that I visited. The staff at Weld County was always willing to take me out in the field to gain field experience and further my understanding in construction practices and standards.

Technically, I furthered my understanding and skill with using computer programs such as AutoCAD, Eagle Point, Arcview, and Excel. Furthermore, I have a better understanding of surveying, planning and development, engineering design, and management responsibilities. The experiences that I gained throughout my summer internship with Weld County Public works will unquestionably assist me throughout my career. The internship was designed to gain experience in several different positions throughout the department so a better understanding was obtained in the complexity of the engineering field. I could not have been more pleased with my experience at Weld County Public Works.