

# David Oldham

## City of Greenwood Village Traffic and Transportation Internship Program Summer 2006

### **Introduction:**

The Mountain Plains Consortium (MPC) at Colorado State University offered internship opportunities throughout the Front Range in Colorado for the summer of 2006 and I was invited for an interview. While many positions were open for placement, it was decided that I should apply for the Traffic and Transportation internship in Greenwood Village, Colorado. After finding out how to come into contact with the city from the Northern Front Range Transportation Internship Program (NFR-TRIP), I was on my way to getting experience through a small municipality. After a long application process for Greenwood Village, I was finally accepted for the summer position of Traffic and Transportation Intern. I would have worked in any type of Civil Engineering related internship, since my school career being in its early years. I wanted to participate in the MPC program to gain experience in the Civil Engineering field. The opportunity through Greenwood Village was helpful with this because I worked in many aspects apart from traffic and transportation.

### **Internship Duties:**

The main goal for my position was to update the city's traffic flow data, which is done on a yearly basis. To complete this task, I placed road tubes on the streets to count how much traffic was traveling through different locations throughout the city on a daily basis. A quick explanation: the road tubes were connected to an Automatic Data Recorder and the recorder was set to count 1 car for every 2 axles that passed over the

road tube and sensed the motion from air pressure. One can see there will be error in the data because of multiple-axle vehicles, but the recorders were still in the 90% accuracy range. In addition to completing the counts for 62 locations I was responsible for organizing the data in Microsoft Excel and calculating the Average Daily Totals (ADT) for each location and the overall ADT. The results from this showed a decrease in traffic volume in the city; my supervisor and I concluded it was down because of the near completion of the Traffic Expansion (T-Rex) Project through the Southeast Corridor of I-25 in the Denver Metro Area. Then, with all the organized data, I put together an informative booklet for the city showing traffic volume patterns.

Between accessing and gathering data from the traffic counts my days were filled with many side duties. The biggest of these duties was to help out the city traffic and transportation inspector who was working on a major intersection rejuvenation project at Arapahoe Rd, Boston/Clinton St. As the project was federally funded, photo documentation was required of all work done on the project. It was my duty to take photographs of the project site and from this I explored several different engineering aspects. A retaining wall exercised my structural knowledge while placement of a huge retention pipe required attention to detail in the environmental area. Overall, the project provided me with an excellent understanding of the interwoven complexity of intersection dynamics.

Additional duties of my position included: putting together a contract for the cleaning and painting of traffic signals, working with my supervisor to reset some traffic signal timings using a program called Synchro. At the culmination of my experience this summer I was invited to come back for summer 2007. I have not made a decision

currently but will be working with them again for my winter break doing more office type work. I will be happy to go back in the winter because the people I worked with were very relaxed about their work and it was just a great atmosphere to be in to gain experience in Civil Engineering.

**Suggestions:**

I don't know about the other interns and how they were placed, but the City of Greenwood Village had a long process for applying for the internship. I waited almost a month after everyone else had already been working before I was notified I got the position. I would recommend beginning the interviews at an earlier date, this way if there are any positions that need to be applied for outside of MPC, it would give someone the opportunity to do so and get the ball rolling before the school year is over. Also, there may only be a few positions but competition is really important for gaining interviewing skills. I would recommend advertising more to the Civil Engineering student body about this opportunity because I had only heard about this from Dr. Gutkowski at an American Society of Civil Engineers meeting.