

## RECRUITMENT

## Kentucky Transportation Cabinet Civil Engineering Scholarship Program

*One innovative program to attract employees to transportation agencies isn't new—the Kentucky Transportation Cabinet Scholarship Program is a cooperative partnership between the Department of Highways and the University of Kentucky system to promote engineering and provide trained transportation personnel to work for the Cabinet. The program has operated for more than 50 years.*

In the late-1940s, the Kentucky Department of Highways (in the Kentucky Transportation Cabinet) was having limited success recruiting enough civil engineers to meet the rapidly increasing demand to build and maintain roads throughout the state. In June 1948, the Dean of the University of Kentucky (UK) College of Civil Engineering proposed a scholarship plan to the Department that promotes the engineering profession and provides a trained cadre of students to work in the Department. In June 1948, representatives of the UK Civil Engineering Department, the Kentucky Department of Highways, and a contractor's organization met and instituted the scholarship program.

Since the program was established, the Department of Highways has invested \$10 million in scholarships, and the program has more than 1,400 graduates. More than two-thirds of the 445 engineers currently working in the Cabinet are scholarship program graduates.

### *The Civil Engineering Scholarship Program*

The Kentucky Transportation Cabinet Scholarship Program has proved an ideal avenue to identify and educate future engineers and it continues to improve the engineering expertise of future Department employees. Initially, scholarship opportunities were offered to two students from each of the state's nine highway districts to attend the University of Kentucky. Although not the sole criterion for selection, committees try hard to choose students who represent the state's diverse highway districts. Over the years, the scholarship program expanded to include pre-engineering programs at Kentucky State University and Western Kentucky University, although these students must finish their degrees at UK. The Department is considering expanding the program to several other universities to encourage applicants from across the state.

Eligible students (see sidebar) apply in the fall to the program at the university of their choice for admission the following year. In addition to the three universities, students may also apply for admission to community colleges with the intent to transfer once they have completed at least 10 semester hours in mathematics, physics, and chemistry.

The scholarship program is promoted to school guidance counselors, through career and school fairs,

*The Civil Engineering Scholarship Program continually pursues statewide recruitment and retention of bright, motivated civil engineers in the Kentucky Transportation Cabinet.*



# Scholarship Program for Undergraduate Civil Engineers

The Kentucky Transportation Cabinet awards scholarships to qualified state residents to study civil engineering at the University of Kentucky. The Cabinet also funds pre-engineering scholarships for qualified residents at Kentucky State University and Western Kentucky University. Pre-engineering students must finish their degree work at the University of Kentucky.

## Qualifications

To be eligible for a scholarship, a student must:

- Graduate from an accredited Kentucky high school or high school graduates who are Kentucky residents.
- Meet admission requirements of the chosen university.

## Agreement with the Cabinet

Scholarship students must agree by contract to:

- Work full-time for the Cabinet immediately after graduation.
- Be an employee one full year for each school year on scholarship.

The Cabinet provides summer employment as long as students make reasonable progress in their academic work and they perform satisfactorily in summer work assignments.

## Conditions of Scholarship

Students will:

- Make normal progress toward a degree.
- Maintain a minimum cumulative GPA of 2.5 (on a 4.0 scale).
- Receive a stipend according to their academic classification (freshman to senior).

and on the Kentucky Transportation Cabinet Web site.

Selected students sign a contract, with the written approval of a parent or guardian, to work full time for the Cabinet immediately after graduation, and they agree to work one year for each school year for which they receive a scholarship. Upon the students' graduation, the Cabinet assigns the new engineers to districts across the state, based on the Cabinet's needs. Many scholarship students request assignment to their home districts.

Over the years, the program has grown from scholarships originally designated for freshmen to one that allows up to five years of study; the fifth year is an option to pursue

a master's degree in civil engineering. Freshmen and sophomore students currently receive a stipend of \$3,200 each semester; juniors and seniors receive \$3,600 each semester.

There are scholarship graduates who decide not to work with the Department, and some employees who leave before they fulfill the condition to work one year for each scholarship year. As part of their agreement, these individuals must repay stipends received.

## *A Continuing Commitment to Performance*

Once graduates join the Department full time, they begin a two-year rotation program through the various divisions.

According to Jo Anne Tingle, scholarship program coordinator—and scholarship graduate, “Scholarship engineers usually rotate through five or six of the divisions, which is a great opportunity for them to learn more about the Department and helps them decide where their skills can best be used. A typical rotation assignment will include time in the Divisions of Planning, Highway Design, Traffic, Construction, Operations, and Program Management. The last assignment is especially important because it gives the new engineer a look at how projects are funded.”

Many new engineers use the rotation to hone their professional interests. It also gives

Department managers the opportunity to see the types of skills available as they fill positions in the various programs. Jo Anne Tingle notes that some engineers rotate through only a few divisions before they find “a professional home.”

Another important benefit of the program and the professional relationships that it builds is that scholarship engineers are able to assume responsibility earlier in their careers. According to scholarship recipient James Ballinger, currently a district branch manager for preconstruction and design, “The program gives us the academic and work experience that can jumpstart a career. One of the early jobs I had was as an engineer on an Interstate highway-widening project. Within six years after graduation, I was the resident engineer on a major bridge project. These were incredible opportunities for someone relatively young in the Department.”

Because the scholarship program has been in effect for more than 50 years, the program attracts second and third generation students. Diane Zimmerman, a senior transportation engineer with Jordon, Jones and Goulding, in Lexington, is a second-generation scholar/engineer. “The scholarship program is truly a family affair in my case. My father is a graduate of the program and he now works in the Governor’s Office of Technology. My sister, Nancy Albright, is a graduate and works with the KYTC. I left the Department only when my husband was transferred out of state. The idea of a 20-plus year

## One Engineer’s Experience

The Department scholarship program not only provided financial support that prepared me academically to be an engineer, it also gave me the on-the-job experience that prepared me for a career in transportation.

I became interested in transportation when I was in high school, but my family was poor and college didn’t seem to be an option. A counselor told me about the Department’s scholarship program; I applied and was accepted. The financial support gave me the security of knowing that I could concentrate on getting an education and that I had a job when I graduated. Through the summer employment, I gained the first-hand experience I knew I needed but couldn’t get in the classroom.

The scholarship program benefits both student and Department. My summer work experience gave me the professional training, but it also gave me insight into the Department’s operation and processes. When I went to work after graduation, I already knew people in the Department and how the organization functioned. At the same time, the Department had time to get to know me before I was a full-time employee.

One of the issues of retaining young engineers is their desire for responsibility early on, responsibility that usually comes only with experience. In my case, once with the Department, I had the self-confidence to pursue assignments, and the Department had the confidence in my ability to give me project responsibilities that many young engineers may not have.

Another important benefit of the program is the fraternity created in the Kentucky transportation community. I went to school with many of my Department colleagues and engineers who now work in the private sector and as contractors. We shared common experiences in school and working together during the summers, which I believe helps us resolve issues more quickly. I also think this shared experience benefits the Department and the taxpayers to whom we’re responsible.

James Ballinger  
Branch Manager for Preconstruction and Design  
District 7, Department of Highways  
Kentucky Transportation Cabinet

career appealed to me; in fact, the combination of academics and summer job experience appealed to me. UK had a reunion celebration several years ago and I was surprised to see who had participated in the program. It was a definite Who's Who of Kentucky Transportation Engineers."

### **Other Considerations: *Competing with the Private Sector***

As noted, not all scholarship graduates remain with the Department. One of the main attractions of private sector employment is salary. Graduates are often lured to private industry with larger salaries and the companies repay the scholarship program obligation as a signing bonus.

Program Coordinator Tingle understands the appeal. "Our starting salary of \$28,500 may seem low, but our graduates usually don't have to contend with repaying high college loans. They get a lot of experience along the way, and the retirement benefits are incomparable."

### ***The Kentucky Transportation Community***

An important benefit of the Department's scholarship program is the community of engineers who work throughout the Kentucky transportation industry. Graduates work in the Department, with contractors, and in other facets of transportation. Diane Zimmerman notes, "I frequently sit in meetings with people who were in classes with me or who

are graduates of the program."

James Ballinger agrees, noting that the camaraderie shared by scholarship graduates working in the public and private sectors creates a rapport that helps solve problems, address issues on projects, and "saves money for taxpayers and the Department."

Many scholarship recipients request assignment to the districts where they were raised and have family, which helps the Department ensure that professionals staff its Divisions. Other graduates find professional homes in the Cabinet's other Departments, including Natural Resources and Environmental Protection. Still others work for municipalities and counties as public works engineers. A few have worked with the Kentucky Transportation Center, a research facility at the University of Kentucky.

### ***To Recruit and Retain . . .***

Throughout the years, the scholarship program has provided the Kentucky Transportation Cabinet with trained, professional engineers. The Department believes that it is a cost-efficient arrangement because it saves time and money that would be spent on recruiting.

Dr. Jim Wang coordinates the scholarship program for the University of Kentucky and sees its value to both university and state. "Our partnership with the state," says Dr. Wang, "enables the University to recruit some of the very best engineering students. It also ensures a well-educated cadre of highly qualified employees to fulfill the state's needs and improve overall engineering

expertise. I spend a lot of time talking to students, parents, and school counselors about its benefits, and I encourage them to participate in this unique program that continues to serve us both very well."

As Jo Anne Tingle notes, "We work hard to attract students from across the state and to increase the number of women and minorities in the program. But the goals have not changed over the years, we want to educate good engineers, provide access to good university programs, and then we want them to come to work for us."

### ***For more Information:***

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