

TRANSPORTATION CAREER PATHWAYS IN VERMONT



Get Moving: Careers in Highway Construction



TRC UNIVERSITY OF VERMONT
TRANSPORTATION
RESEARCH CENTER

HIGHWAY CONSTRUCTION: INTRODUCTION

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IS THIS CAREER RIGHT FOR YOU?

- Do you enjoy traveling around Vermont's scenic highway system?
- Are you happiest working with your hands?
- Does operating heavy equipment excite you?

WHAT IS HIGHWAY TRANSPORTATION –

Highways are the major roadways that enable the traveling over great distances in a relatively short period of time.

HIGHWAY IN VERMONT –

VTrans is the Vermont Agency of Transportation. The agency is comprised of five divisions: Motor Vehicles (DMV) Program Development, Operations, Finance & Administration; Policy, Planning & Intermodal Development. One of the agency's primary functions is to maintain the federal highway system in Vermont that is so vital to Vermonters' businesses and lives. Services performed on the highway system include planning, surveying, construction, plowing and maintenance.

VTrans serves the entire state out of nine garages located throughout Vermont. From the remotest corner of the Northeast Kingdom to Chittenden county, maintenance crews are needed everywhere there are state or federal roadways. This makes jobs in maintenance with the state plentiful and accessible wherever you live.



Career biography of Scott Rogers

Scott Rogers has engineering built into his DNA. Skilled at math and science and the son of an engineer, he naturally fell into an engineering career path. Specializing in soil mechanics at UVM, he quickly learned that jobs in soil mechanics were few and far between. When he graduated UVM he applied to over 40 engineering firms hoping to take any job he could get. He got rejected time after time without even being interviewed. To put it in perspective, Scott was able to completely cover one of the walls in his bedroom with rejection notices. Curious, then, how this person went from barely being able to find an entry-level job at an engineering firm to becoming the Director of Operations for the Vermont Agency of Transportation (VTrans).

Scott got his foot in the door at VTrans after he graduated UVM as a summer intern in their soil lab. He was able to find a permanent position at a firm in Boston and left Vermont. At this time, computers were just coming out so a lot of the work we do now with software he did by hand. It was a fun, new and exciting job that he gained a lot of experience from. He loved the job, but didn't love living in the city. Growing up, he had frequently gone to Red Sox games with his father and made trips to Boston with his family often. But visiting a city is different from living in one. He missed the small town lifestyle and Vermont way of life. After just a year in Boston, Scott made his way back up north and found a job in Montpelier.

The job in Montpelier was unlike anything Scott had ever done before. It was a small engineering firm that worked on land development which entailed designing leech fields for septic systems and roadway drainage. It's with this job that he really began to develop his civil engineering skills. The small work environment meant he also had a lot of mentorship from his colleagues, which was very important for his professional development. He and a colleague started their own firm which is where Scott became passionate about highway hydraulics (science of water movement). He became a project leader for a highway design squad and excelled in the work. It is in this position that he made a lot of contacts with people in state government with whom they did a lot of business.

Eventually the long hours of work on the weekends and holidays began to wear on him. He was starting a family and wanted to be able to spend more time with them. A colleague of Scott's moved out of the private sector and began working for the state and convinced Scott to apply to VTrans. He moved up the latter quickly and took a job opening in another department. He had no idea what they did in the operations department, but he took a risk and went for it. He is now the director of that department.

Scott didn't plan to end up where he is now when he was 20. A willingness to take risks and the connections he made with colleagues propelled him into the career he has today. He advises anyone in any career to be open to taking risks, work hard, develop connections with people and most of all, love what you do.



Career biography of Tammy Ellis

Tammy Ellis has had a long and illustrious career at the Vermont Agency of Transportation (VTrans). As with so many other professionals, her career with VTrans started with a summer internship. Through genuine curiosity and ambition, Tammy climbed the professional ladder at the department from summer intern to general manager in charge of operations for the Southeast corridor of Vermont. In addition to her position as general manager, she was also tasked with coordinating the ground operations in the immediate aftermath of Tropical Storm Irene that devastated roads and bridges across the state, leaving some towns completely isolated.

Tammy always enjoyed working with her hands and figuring out how things work. After graduating from Windsor high school, she began a two-year associated degree in civil engineering at Vermont Technical College (VTC). A lot of new computer software for engineering was coming out at the time and her exposure to it in her classes helped her land that summer internship with VTrans. She ended up leaving her degree program at VTC to work full time for VTrans. She credits gaining that first job to networking with the people she worked for and seeking out mentorship from knowledgeable supervisors.

A reorganization at VTrans led to a change in Tammy's career. She had been previously working in the construction division that was eventually merged with the maintenance division because construction stops during winter and the construction folks were housed at one of the district maintenance garages. New money was coming in from the federal government for maintenance operations but it required that they have an engineer. Because the leaders in the maintenance division knew Tammy, they hired her. She learned how the district garage operated and was promoted to general manager once the position was free.

Tammy continued her education throughout her career. She completed a two-year associate degree in applied science at CCV before becoming general manager. While working full time in that position, she enrolled part time and graduated from Johnson State College with a bachelor of business management and Norwich University with a master of business administration. When she got her foot in the door at VTrans she had no degree, but through a persistent will to advance in her career, she went back to school part time on VTrans's dime and now holds a graduate degree.

She advises anyone in in any career to be open-minded, curious, and seize opportunities when they present themselves. Much of what she was able to accomplish was what she threw herself into that wasn't part of her job description. She was promoted ahead of people with more experience and qualifications because she was a go-getter. She went the extra mile and people noticed.



DPW CAREER PATHWAYS:

ROAD CREW CAREER PATHWAY

Maintenance Worker I

Performs a number of laboring and semi-skilled tasks, such as: repair and installation of guardrails, bridge washing, sweeping, flagging traffic, mowing, repairing road shoulders, cleaning the roadsides, cutting trees and brush, cleaning drains, and assisting with operator maintenance and inspections.

Maintenance Worker II

Similar to Maintenance Worker I additional duties include Drives, maintains and inspects vehicles; performs related duties as required. CDL Required

Maintenance Worker III

Assists with maintenance of roads and right of ways, repairing bridges, sealing pavement cracks, paving, painting, patching potholes and surfaces; Winter roadwork includes plowing, sanding, and salting, as well as the operation of large or small trucks, with or without snowplow and wings; May operate loaders, rollers, and other equipment and perform operator maintenance inspections.

Maintenance Worker IV

Routine maintenance and repair work, often requiring the use of a variety of tools and vehicles; Requires the use, maintenance, and inspection of large equipment (backhoes, skidsters, excavators, bulldozers, guardrail pounder, Servo-lift truck, tanker trailer truck, equipment trailer hauler, bucket truck, heavy snow- blower, roller, and grader);

Maintenance Worker V

Responsible for specialized duties assigned involving training and inspection work in the areas of safety, environmental and hazmat; Incumbents are trained and/or certified and responsible to train others in VOSHA; hazmat and environmental regulations, and safety.

Maintenance Worker VI

Responsible for the operation and maintenance of an outpost garage and administering the district stenciling program. Maintains outpost gaage communicating work assignments to specialized work crew members, providing instruciton and supervising daily routine maintenance activities.

Seniou Maintenance Worker

Responsible for the operation and maintenance of an outpost garage and administering the district stenciling program. Maintains outpost gaage communicating work assignments to specialized work crew members, providing instruciton and supervising daily routine maintenance activities.

Area Maintenance Supervisor

Responsible for the operation and maintenance of an outpost garage and administering the district stenciling program. Maintains outpost gaage communicating work assignments to specialized work crew members, providing instruciton and supervising daily routine maintenance activities.

Getting a Start in a Transportation Career

The University of Vermont's Transportation Research Center (TRC) has worked with high schools, career centers and Adult Education programs to generate awareness about careers in the transportation industry and develop programs to provide the necessary skills to gain entry-level positions in all modes of transportation (aviation, transit, highway, maritime, pipeline and railway). Careers in transportation are not limited to any single mode; many of the skills in one area of transportation can be applied to many or all of the others. In many cases, getting your foot in the door in one mode of transportation gives you access to jobs in the other modes.

A Good Start in Transportation Work:

- Offers you lifelong job opportunities in an industry that is everywhere (you can work in the community you grew up in or find work anywhere in the country with the right skills).
- Provides essential services for our communities and business.
- Has great opportunities for advancement, as a high percentage of current workers will be retiring in the next decade.



Educational and Employment Resources in Highway Construction

Educational Resources:

- Career and Technical Centers in Vermont - goo.gl/nwBVO
- Community College of Vermont Applied Business Practices (with a focus on transportation) - goo.gl/mHRWO
- Vermont Technical College - <http://www.vtc.edu>

For Educators

- Transportation Systems Academy - <http://www.uvm.edu/~transctr/>

Key Skills Resources:

- Work Zone Flagging - Green Mountain Flagging <http://www.gmfvt.com/>
- Commercial Drivers Licences Schools in Vermont - http://dmv.vermont.gov/commercial_trucking
- Vermont Dept. of Motor Vehicles CDL Manual - <http://dmv.vermont.gov>

Employment and Career Resources:

- Resume resource <http://www.resumebuilder.com/>
- Career skills resource - <http://humanresources.vermont.gov/>
- Occupational Information Network (O*NET) - <http://www.onetonline.org> (*Onet is a free online database of occupational information. Students, job seekers, businesses, and counselors should use Onet to explore careers in transportation.*)

For Veterans:

- US Department of Transportation Veterans Transportation Career Center - <http://www.dot.gov/veterantransportationcareers>
- My Next Move for Veterans - <http://www.mynextmove.org/vets/>
- Hero 2 Hire - <http://h2h.jobs>