Richard William Connelly, P.Eng.

Qualifications: B.Sc. Civil Engineering, Queen's University 1970

P. Eng.Designation (1972)

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Status: Retired

Civil works specialist in Land Planning, Infrastructure Design, Site and Project Management.

Pre-Graduation - Six years of summer work with a Civil Engineering firm to develop skills - municipal construction oversight, layout land surveying, design of sanitary and storm sewers, water infrastructure, design, drafting, and concrete strength testing,. Legal land surveyor in Yellowknife (1968).

Post-Graduation – Upon graduation became the Project Engineer for a 660 acre satellite city (estimated population of 16,000) west of Ottawa. This project included all commercial, educational, and health supporting facilities in the master plan. I was subsequently approached to join M.H. Kilpatrick Associated, Planners and Engineers (Toronto based) to set up and manage a new office to service their growing client market in the Ottawa area, including local land developers and assignments for municipal engineering services for a number of local municipalities. I served on their Board of Directors.

Kilpatrick Associates designed one of the first major storm water management plans in the Ottawa area utilizing a 100 year rainfall event for the reconstruction and channelization of the upper Carp River with headwaters in Kanata. This was a massive project serving Glen Cairn and upstream lands.

My private practice, R.W. Connelly Associates Inc., Consulting Engineers & Planners, began in 1977. Services included planning and administration of the first two rural residential developments (in West Carleton and Goulbourn Townships). We planned, processed, and engineered one of the largest estate lot projects in the greater Ottawa area (Tranquility Estates - 240 acres), including the integration and expansion of an adjacent golf course (Canadian Golf & Country Club). We continued to plan, administer, and develop more than 50 additional residential projects along with many industrial subdivisions for private clients throughout Ottawa west. Administration took as much as 10 years/project.

Other immediate work commenced in northern Canada, including assignments in Pond Inlet, Pangnirtung, Spence Bay, and Big Trout Lake (ON). Work orders were to assist communities with land planning and the technical support for local infrastructure (water supply, sewage treatment, waste control and management, roads, etc).

In 1987, we were retained by CoWater International to act as their engineering expertise for many assignments throughout the world, developing administrative process, municipal standards, and financial planning. The Ontario Ministry of the Environment commissioned Cowater and our firm to develop a new and alternate technology for sewage collection to replace/update suitable technology for rural areas, towns, and communities serviced by private sewage systems. We were successfully acknowledged and this system was added to their inventory of options (included with "An Introduction to Communal Sewage Systems"). We completed the design and oversight for a successful pilot project in the Village of Field, On, in 1989. This project brought the attention of many rural municipalities in Ontario (incuding Wardsville, Cramahe and Mississippi Mills as mentioned below).

As this technology (Small Diameter Variable Grade Sewers) SDVG continued to develop through research, and new projects, it became one of the most viable options for Towns/settlements under stress. We were contracted to complete a design-build project for the Village of Wardsville, ON, where previous engineering studies estimated $8.5M to re-service the community with traditional solutions. This was classified as unaffordable by the Council and the residents. Our contract price was $4.5M, employing SDVG technology, extended aeration treatment, and horizontal boring (for the installation of the piping network). The project was completed in half the normal time and half the normal cost. The treatment system was less than half the size and cost of the original proposal.

The successful completion of this project led into a number of new opportunities and heightened the interest from many municipalities that required either extensions, replacement, or to service new areas of their community. SDVG technology has been applied to numerous projects in Ontario and elsewhere. The White Tail Ridge project in Mississippi Mills has been recently completed. SDGV services provided the opportunity to increase lot density on rural lot developments with half of the impact on the central treatment facilities (compared to conventional technology). Communal services changed the semi-rural project from 60 estate lots to 175 approved residential connections.

Other completed projects:

- the rehabilitation/reconstruction of Highway 44 through the Town of Almonte,
- lane barrier design for Highway 401 in areas adjacent to Brockville, ON
- the design and construction oversight of the Kanata Park and Ride station, including SWM (100 yr. rainfall) facilities and expropriation of adjacent lands ($9M budget)
- Municipal Drain upgrading/reconstruction in the Township of Osgoode
- the design, construction and supervision for the Village of Edesville, Mayland, USA, using SDVG sewers and a deep well, water and sewage treatment, and a domestic water supply system, utilizing a tree farm as the final polishing system for the discharged effluent (the piping was installed by trenchers, saving major damage to the local properties and existing infrastructure)
- a SDVG design-build for the Village of Cramahe industrial Park extension
- Environmental Study Report for new development impact analysis on existing servicing capacities to support the successful advancement of the White Tail Ridge project