



Stephen O'Brien, P.Eng.
President

EXPERIENCE SUMMARY

Mr. O'Brien is president of DLW Engineering Services Limited, responsible for managing water and wastewater projects. His experience encompasses approximately 30 years of municipal engineering that includes client relationship development, business development and team building as well as all facets of project implementation from the initial planning, conceptual design and preliminary process selection stage through detailed design, construction, commissioning and start-up of water and wastewater engineering projects. He is well versed in the preparation of class environmental assessments, contract drawings and specifications and operations manuals as well as in the development of cost estimates.

PROFESSIONAL RECORD

2012/Present	DLW Engineering Services Limited, President
2007/2012	Tetra Tech WEI Inc./Wardrop Engineering Inc., Regional Manager Infrastructure, Southern Ontario
2006/2007	KMK Consultants Limited, Manager, Water Division
2003/2006	Giffels Associates Limited, Vice President, Infrastructure
2002/2003	Acres and Associated Environmental Limited/Associated Engineering Limited, Manager, Water Division
2000/2002	Earth Tech Canada Inc., Manager, Wastewater Department
1990/2000	KMK Consultants Limited, Associate & Senior Project Engineer

WATER ENVIRONMENTAL ASSESSMENTS

- Regional Municipality of York, Durham West Long-Term Water Supply, Project Manager. Water quality and treatment issues for the development of the Terms of Reference and completion of Phases 1 and 2 of the Individual EA, to establish a Lake Ontario-based water supply for York Region. Duties included rationalization of planning data to establish the basis for the planned infrastructure over a 40-year planning horizon.
- Peel Region, Water Servicing Master Plan for the Lake-based System, Project Engineer. Assistance with the translation of planning data and establishing plant and linear infrastructure (large transmission mains and trunk sewers) development plans to help meet forecast growth within the Region over a 30-year planning horizon.

CLASS ENVIRONMENTAL ASSESSMENTS

- Class EA for the following water treatment and distribution Systems
 - Stouffville Water Supply Class EA, York Region
 - Ballantrae Water Supply Class EA, York Region
 - Zone 5 Sub-transmission, Region of Peel
 - Lorne Park WTP Expansion, Peel Region, 2006
 - Herridge Feedermain Twinning, Peel Region
 - Township of Ennismore
 - McKelvey Well WTP, Village of Beeton
 - Township of New Tecumseth
 - Lorne Park WTP Expansion, Peel Region, 1998
 - Village of Frankford

Education:

University of Guelph, B.Sc. (Eng.), Water Resources Engineering, 1990

University of Toronto, B.Sc., Environmental Science and Physical Geography, 1988

Registrations:

Professional Engineers of Ontario (PEO)

Designation as a Consulting Engineer

Ontario Water Works Association (OWWA)

American Water Works Association (AWWA)

Water Environmental Association of Ontario (WEOA)

Office:

Caledon, Ontario

Years of Experience:

29

Areas of Expertise:

Project Management

Class Environmental Assessments

Water and Wastewater Treatment Plant Design

Treatment Plant Process Evaluations

Hydraulic Analysis and Pumping Stations Designs

Contract Administration

Water Distribution Systems and Sewage Collection Systems

WATER TREATMENT PROJECTS

- Geranium Corporation Midhurst Carson Road Water Treatment Plant, Springwater, ON. Project manager for the predesign of a new 6.8 ML/d water treatment plant with ion exchange for nitrate reduction and greensand filtration for iron and manganese removal. The project includes new low and high lift pumping station, ultraviolet disinfection and a 4 ML inground reservoir.
- Sierra Lane Developments, Stonebrook Estates Water Treatment Expansion, Hamilton ON. Project manager for the design of a 286,720 L/d conventional water treatment plant expansion to service the Phase II development. The work included pressure tanks, cartridge filters, ultraviolet disinfection, chlorine disinfection, separate potable water and fire water supply systems, and a reservoir expansion.
- Peel Region, Lorne Park WTP Expansion. Project manager: Class EA, preliminary and detailed design for the membrane plant retrofit of existing conventional plant, from 347 ML/d to 500 ML/d. Work includes new high and low lift pumping station and ultraviolet disinfection with provision for advanced oxidation for taste and odour control.
- Township of Hamilton, Creighton Heights and Camborne WTP Expansions. Project manager: concept, preliminary and detailed design and construction of two greensand filtration plants – one plant expansion and one new WTP. Process components include new wells, greensand filters, ultraviolet disinfection, and one new reservoir and modifications to another.
- City of Hamilton, Woodward Avenue Water Treatment Plant upgrades. Project director for the conceptual, preliminary and detailed design for the upgrades to the coagulation system for the conventional water treatment plant.
- Belle River WTP Upgrade and Expansion, Lakeshore. Project manager: conceptual, preliminary and detailed design and contract administration for demolition of existing 18.2 ML/d conventional WTP and provision of a new 36.4 ML/d WTP. Process components include travelling screens, upflow clarifiers with dual media filtration, ultraviolet disinfection and chemical systems. Work included existing intake modifications, a 9 ML reservoir and new low and high lift pumping station upgrades.
- Halton Region, Oakville WPP Upgrade. Project manager: preliminary and detailed design and contract administration for upgrade to the 109 ML/d conventional WTP. Work included new high rate treatment (Actiflo) units, ozonation for disinfection and taste and odour control, new 4 ML reservoir, high lift pumping system modifications and new and upgraded chemical systems.
- Town of Collingwood, Raymond A. Barker Ultrafiltration WTP Expansion. Project manager: detailed design for expansion and upgrades of membrane filtration plant, increasing capacity from 31 ML/d to 86 ML/d. Work included ultraviolet disinfection with provision for advanced oxidation for taste and odour control.
- Peel Region, Lorne Park WTP Expansion. Project manager: Class EA, preliminary and detailed design and contract documentation for conventional WTP expansion. Work involved 120 ML/d expansion to the existing 227 ML/d facility and included new coagulation, flocculation, high rate settling, dual media filtration systems and standby power facilities. The scope also included new process waste facility consisting of a new holding tank with four new clarifier/thickeners.
- Peel Region, Lorne Park WTP Modifications. Project manager: preliminary and detailed design, contract documentation, contract administration and construction supervision to replace existing inline blenders with new coagulation facilities and baffle curtains within the existing reservoirs to improve disinfection capability.
- Ministry of the Environment Report for Water Works. Project manager and process analyst: Engineers' Reports, as required by the Ontario Drinking Water Protection Regulation 459, covering characterization and assessment of the raw water supply source, review of water quality sampling data and operational policies, and facility site inspections to confirm the overall design, operation and maintenance is such that maximum protection from contamination is provided. Projects included:
 - City of Toronto, F. J. Horgan Filtration Plant, 570 ML/d direct filtration WTP
 - City of Toronto, Island Filtration Plant, 410 ML/d direct filtration WTP.
 - Peel Region, Lakeview WTP, 450 ML/d conventional WTP
 - Peel Region, Lorne Park WTP, 72 ML/d conventional WTP

- Caroni WTP Rehabilitation, Trinidad, West Indies. Project manager and process specialist: development of optimization report and preliminary and detailed design for the rehabilitation of a 272 ML/d conventional WTP. Work included new coagulation facilities, modifying existing hydraulic flocculation and sedimentation tanks and rehabilitating the existing dual media filters and process waste lagoons.
- Navet WTP Rehabilitation, Trinidad, West Indies. Project manager and process specialist: development of optimization report and preliminary and detailed design for the rehabilitation of a 90 ML/d conventional WTP. Work involved modifying existing mechanical flocculation and high rate settling tanks and rehabilitating the existing dual media filters and process waste lagoons.
- Frankford WTP, Frankford. Project manager: preliminary and detailed design, contract documentation, contract administration and construction supervision of "greenfield" conventional 3.5 ML/d WTP. Process components included fine screens, Graver monoplants (consisting of integral flash mixing), high rate settling and dual media filtration and Napier Reid GAC contactors. Work also included inground clearwell/reservoir, standby power facilities and process waste facilities consisting of a holding tank and a settling tank with outfall to the nearby Trent River.
- Beeton-McKelvey Well WTP, Village of Beeton, New Tecumseh. Project engineer: detailed design, contract documentation, contract administration and construction supervision of "greenfield" 3.15 ML/d lime softening WTP, complete with GAC contactors. Work included air stripping towers for methane removal, standby power facilities and construction of lime lagoons.
- Chapleau WTP Rehabilitation, Chapleau. Project engineer: optimization report, preliminary and detailed design, and contract documentation for 1.8 ML/d conventional WTP. Work included rehabilitation of existing upflow clarifiers and provision of sludge bagging system used to thicken and dry the process waste sludge.

WATER SUPPLY, STORAGE AND DISTRIBUTION PROJECTS

- Friday Harbour, Big Bay Point New Standpipe, Innisfil, ON. Project manager for the design and construction of a new 3.3ML elevated storage tank to service the new Friday Harbour development.
- York Region, Sherwood Forest Booster Pumping Station, East Gwillimbury, ON. Project Manager for the condition assessment, design and construction of upgrades to a 4.4 L/s potable water pumping station. The work includes electrical and process mechanical upgrades and included a new flow meter in an existing Davis Drive Metering Chamber.
- York Region, West Richmond Hill Pumping Station Peer Review, Richmond Hill, ON. Project Manager retained by the Region to peer review the pretender design and cost estimate for an expansion to the West Richmond Hill Pumping station and reservoir.
- York Region Oak Ridges Well Facility Decommissioning, Oak Ridges, ON. Project manager for the decommissioning of a well field and treatment system and extension of a watermain.
- Sierra Lane Developments, Stonebrook Estates Watermain Extension and Inground Reservoir Expansion, Hamilton ON. Project manager for the design of 2km of 100mm diameter watermain extension and reservoir expansion from 82,000 L to 217,120 L to service the Phase II development.
- Region of Peel, Beckett Sproule Reservoir and Pumping Station Upgrades, Brampton, ON. Project manager for the condition assessment, preliminary and detailed design of piping modifications to improve system hydraulics and life safety upgrades to an 800 ML/d inground reservoir and pumping station.
- Region of Peel, Zone 5 Sub-transmission Main, Brampton, ON. Project manager for the schedule C Class EA and preliminary design for a 900m diameter watermain. The work includes several trenchless sections including crossing of Highway 410
- Region of Peel, City of Brampton, ON. Federal Infrastructure Fund Watermains Assignment E-1 (South Brampton). Preliminary and detailed design, contract administration and site inspection for the supply and installation of 340 m of 300 mm watermain, 4,400 m of 150 mm watermain, approximately 350 m of 50 mm watermain, and appurtenances on Ferndale Crescent, Riverview Drive, Parkview Place, Farmington Drive, Sifton Place, Willowcrest Court, Donaldson Drive, Lorne Court, and Lockton

Crescent, all located in the City of Brampton. The work also included connection to the existing watermains, installation of water services, and restoration to all areas to match or improve upon existing conditions.

- Region of Peel, City of Brampton, ON. Federal Infrastructure Fund Watermains Assignment E-2 (North Brampton). Preliminary and detailed design, contract administration and site inspection for the supply and installation of 120 m of 400 mm watermain, 215 m of 300 mm watermain, 330 m of 200 mm watermain, 2,825 m of 150 mm watermain, 1,030 m of 50 mm watermain, and appurtenances on various streets and crescents in the City of Brampton. The work also included connection to existing watermains, installation of water services, and restoration to all areas to match or improve upon existing conditions.
- Region of Peel, Town of Caledon, ON. Federal Infrastructure Fund Watermains Assignment E-3 (Caledon). Preliminary and detailed design, contract administration and site inspection for the supply and installation of approximately 3,270 m of 300 mm watermain, approximately 475 m of 150 mm watermain and appurtenances on Kennedy Road, King Street and Hurontario to extend water services to the communities of Campbell's Cross and Victoria in the Town of Caledon. For this project, 385 m of mainline watermain under two warm-water crossings and one cold-water crossing were installed by Horizontal Directional Drilling. The project involved extensive approval negotiations with TRCA and MTO. The work also includes connection to the existing concrete pressure pipe watermain on Kennedy Road, installation of water service connections, road resurfacing, and restoration to all areas to match or improve upon existing conditions.
- City of Hamilton, Water System Risk Assessment. Project manager: development of a risk assessment and management procedure for the City's water systems to comply with the MOE's Drinking Water Quality Management System (DWQMS) requirements.
- City of Hamilton, SCADA System Development. Project Manager to assist the City of Hamilton select a Consultant to provide Professional Engineering Consulting Services for Development and Implementation of a SCADA Standards and SCADA Master Plan for Water and Wastewater Services
- Alton Mills Inc. – Thomas Farm Estates Booster Pumping Station. Project manager: detailed design and contract administration for an 11.6 L/s potable water booster pumping station. The work included water distribution system modelling and the supply and installation of standby generators and four 1900L pressure tanks.
- Peel Region, Herridge Feedermain Twinning. Project manager: Class EA, preliminary and detailed design of approximately 6.3 m long 2,100 mm diameter concrete pressure pipe installed using tunnelling methodology.
- Peel Region, Dixie Road Booster PS and Feedermain. Project engineer: detailed design, preparation of contract documentation, contract administration and construction supervision of booster pumping station and 300 mm diameter feedermain. Work included 1,900 L pressure tanks for balancing storage and standby power facilities.
- Peel Region, Inglewood Well Pumping Station. Project engineer: coordination of well development studies and preparation of conceptual site layouts. Subsequent work included the internal peer review of final design and contract document preparation phases.
- Peel Region, Bolton Well PS. Project engineer: internal peer review of final design and contract documentation. Work included a section of feedermain.
- Halton Region, Burloak WTP Intake Preliminary Design. Project engineer: process, hydraulic (steady-state and transient) and preliminary design of approximately 4 km long, 2,100 mm diameter intake tunnel for the proposed WTP.

WASTEWATER ENVIRONMENTAL ASSESSMENTS

- Peel Region, Wastewater Servicing Master Plan for the Lake-based System. Project engineer: development of wastewater quality and treatment issues within the master plan.
- Class EA for Wastewater Collection and Treatment Systems:
 - Bexhill Sewage Feedermain EA addendum

- Township of Ennismore
- Village of Beeton
- Village of Westport
- Town of Cobalt
- Township of Haileybury
- Village of Frankford

WASTEWATER TREATMENT PROJECTS

- Geranium Corporation Midhurst Wastewater Treatment Plant, Springwater, ON. Project manager for the predesign of a new 6.5 ML/d wastewater treatment plant. The process units include low lift pumping, headworks with screening and grit removal, biological nutrient removal system followed by tertiary membrane treatment, ultraviolet disinfection, and effluent pumping to a surface water course. Biosolids treatment includes Autothermal Thermophilic Aerobic Digestion.
- York Region, Aurora Sewage Pumping Station Hauled Wastewater Receiving Facility, Aurora, ON. Project Director for the planning and design of a grit removal, sampling, and billing system for the hauled wastewater receiving facility. This station, which is an integral part of the York-Durham Sewage System (YDSS), conveys sanitary sewage from the Town of Aurora and Town of Newmarket to the Duffin Creek Water Pollution Control Plant (WPCP). The treatment system was designed for a maximum septage flow rate of 15.8 L/s.
- Sierra Lane Developments, Stonebrook Estates Wastewater Treatment Plant Expansion, Hamilton ON. Project manager for the design upgrades to the existing wastewater treatment plant. The design includes a tertiary wastewater treatment plant expansion (from 40,000 L/d to 170,000 L/d) to service the Phase II development. The work included septic tanks in the residential community with filter cartridges as primary treatment, a pressurized sewer system, a central treatment facility with recirculating sand filters, and leaching beds with shallow buried trenches. The work included the provision of a post anoxic treatment process to reduce the total nitrogen in the treated effluent from the secondary treatment facility.
- Geranium Corporation Midhurst Wastewater Treatment Plant, Springwater, ON. Project manager for the peer review of the preliminary design for a 12,300,000 L/d tertiary wastewater treatment plant to service a new community. The work included, grit removal, screenings facility, a biological nutrient removal system with membrane bioreactors for tertiary treatment and ultraviolet disinfection system.
- Fernbrook Estates Wastewater Treatment Facility, Hamilton, ON. Project manager for the peer review of the existing communal wastewater system that includes a conventional activated sludge wastewater treatment facility. The system includes 150,000L pretreatment tank for flow attenuation and grit removal, a 110,000 L/d package STP with primary settling, grit removal, four stage biological process with denitrification, secondary clarification, sludge storage, aeration, pumping and chemical feed system with dosing chamber with pumps and forcemain to subsurface disposal system.
- Ponderosa Nature Resort Wastewater Treatment Facility, Hamilton, ON. Project manager for the peer review of the existing communal wastewater system consists of an 80,000 L/d secondary treatment Waterloo Biofilter System that is designed to meet Biological Oxygen Demand (BOD₅) 10 mg/L, and Suspended Solids (SS) 10 mg/L and which comprises of 3 trains of septic tanks, balancing tanks and biofilters followed by a leaching bed effluent disposal system.
- Ministry of the Environment, Deloro Arsenic Treatment Plant Upgrades, Deloro, ON. Project manager for the preliminary and detailed design of upgrades to the arsenic treatment plant that treats contaminated groundwater. The work includes new sludge lagoons, ferric chlorine and lime system upgrades, new standby generator set, new forcemains, electrical upgrades and miscellaneous site upgrades.
- Halton Region, Skyway WWTP Expansion. Project director: contract administration for upgrade and expansion increasing secondary treatment design capacity from 93 ML/d to 118 ML/d. Work included nitrification, new secondary clarifiers, aeration tanks, return activated sludge, pumping station, waste gas burners, new hypochlorite storage facilities and new blower building.

- Halton Region, Acton Wastewater Treatment Expansion. Project director: detailed design and contract administration for 4.5 ML/d tertiary treatment plant upgrades. Work included nitrification, new headworks building with new screenings conveyor and grit classifier, new raw sewage pumping system, replacement of surface aerators with jet aeration system, new tertiary filters, new ultraviolet disinfection system and plant-wide SCADA system for monitoring and control.
- Frankford WWTP, Village of Frankford. Project manager: preliminary and detailed design, contract documentation, contract administration and construction supervision for 9 ML/d extended aeration facility with tertiary filtration and ultraviolet disinfection. Work included aerobic digesters and holding tanks, as well as the decommissioning of the existing activated sludge plant.
- Township of Chapleau, Chapleau WWTP Rehabilitation. Project engineer: optimization report, preliminary and detailed design, contract documentation and construction administration for rehabilitation of aerated lagoon system.
- Town of Haileybury, North Cobalt WWTP. Project manager: environmental study report, preliminary and detailed design, contract documentation and contract administration for aerated lagoon system with ultraviolet disinfection. Work included the construction of a sludge transfer facility for sludge from the Haileybury WWTP.
- Town of Cobalt, Cobalt WWTP. Project Manager: preliminary and detailed design, and contract documentation for primary treatment facility with discharge through a constructed wetland.

WASTEWATER COLLECTION AND TRANSMISSION PROJECTS

- Majestic Estates Sewage Servicing in Halton Region. Project manager for the assessment, design and construction of the upgrade to the existing 4 L/s Shorewood Place SPS to service the Majestic Estates development. The work included a new emergency storage tank and upgrades to pumps and controls at the existing pumping station.
- York Region, Black Creek Sewage Pumping Station Upgrades, Vaughan, ON. Project manager for the condition assessment, preliminary and detailed design and contract administration for the upgrading of an existing 1320L/s sewage pumping station. The work including provision of a new pump, piping, electrical, structural, mechanical and site upgrades including provision of a new chlorine/H₂O gas scrubber system.
- City of Vaughan, Block 40/47 Sewage Pumping Station, Vaughan, ON. Project manager for the design of a new 274L/s wet well/dry well sewage pumping station. The work included the design of two trenchless crossings of a creek, a new 2 hour peak storage tank, and odour control facilities. The trenchless crossings were later replaced with 2 pedestrian bridges spanning across the creek from which carried the influent sewers and water mains.
- York Region, Keswick South, Joe Dales PS Upgrades, Keswick, ON. Project manager for the late construction stages of this 334L/s sewage pumping station upgrade. The project includes new pumps and drives, a new standby power system, new VFD MCC's, new instrumentation and control systems, channel grinder and related inlet channel modifications for incoming sewage, health and safety enhancement, architectural modifications, and hydraulic and transient analysis of the forcemains.
- Friday Harbour, Big Bay Point Pumping Station, Innisfil, ON. Project manager for the design and contract administration for two new sewage pumping and four stormwater pumping stations to serve a new development in the Town of Innisfil.
- North Humber Landowners Group for the City of Vaughan, Kleinburg North Sewage Pumping Station, Vaughan, ON. Project Manager for the design, tender, construction administration, and site inspection of a new 17L/s SPS with capacity to accommodate a future expansion up to 61L/s. The work included a 200mm-diameter 480m-long PVC forcemain. The work included tendering assistance and construction administration services.
- Humphries Planning Group for the City of Vaughan, Nashville SPS Upgrades, Vaughan, ON. Project manager for the completion of detailed design and contract administration for a 51L/s sewage pumping station upgrade. The work included a 170m³ emergency storage tank, new pumps and new generator set.

- York Region, Leslie St. Sewage Pumping Station Upgrades, Vaughan, ON. Project manager for the later stages of design and contract administration for this 7500L/s sewage pumping station upgrade. The work included hydraulic and transient analysis, new process discharge piping and valving, and other miscellaneous upgrades while keeping the station in service throughout upgrades
- Peel Region, Intermodal Sewage Pumping Station Upgrade. Project manager for the condition assessment, preliminary and detailed design, and contract administration for the upgrading of an existing 213 L/s sewage pumping station. The work includes the provision of new pumps, motors and starters, new comminutor, new flow metering chamber, upgrading of all platforms, ladders and hatches, and upgrades to existing piping system.
- Peel Region, Bexhill Sewage Pumping Stations. Project manager: preliminary and detailed design of two sewage pumping stations, rated for 100 L/s and 800 L/s respectively. Work includes standby power and odour control facility.
- Peel Region, Bexhill Forcemain. Project manager: EA addendum and preliminary and detailed design of approximately 2 km long, twin 600 mm diameter sanitary forcemains.
- Town of Newmarket SPS Condition Assessment. Project manager: condition and reserve capacity assessment of the Bogart Creek and Bayview Avenue sewage pumping stations. Work included pre-design and cost estimate for proposed works required to meet future system demands.
- Town of Haileybury, North Cobalt PS Upgrades. Project manager: preliminary and detailed design, contract documentation and contract administration for two sewage pumping stations. Work included new forcemain and trunk sewer.
- Village of Frankford, Frankford SPS. Project engineer: preliminary and detailed design, contract documentation, contract administration and construction supervision for 9 ML/d sewage pumping station. Work included new forcemain and standby power facilities.
- Peel Region, Beach Street SPS Upgrades. Project engineer: preliminary and detailed design, contract documentation, contract administration and construction supervision for sewage pumping station upgrade, increasing capacity from 49 ML/d to M65 L/d. Design included three new 250 hp pumps with variable frequency drives, and new standby generator.

INDUSTRIAL WASTEWATER PROJECTS

- Global Furniture Group Wastewater Treatment Plant: Provided review of the existing wastewater treatment plant and provided design and construction support for a new 3.8 L/s wastewater treatment plant for the electroplating facility.
- Daimler Chrysler Wastewater Treatment Plant, Windsor. Project manager: design review study of existing wastewater treatment system. Plant processes included flow equalization, oil/water separation and membrane microfiltration treatment prior to sanitary sewer discharge.
- Royal Canadian Mint Wastewater Treatment System, Winnipeg, MB. Project manager: design and construction administration of wastewater treatment system for a facility that involved electroplating and finishing of steel coins. Treatment utilized semi-continuous flow through neutralization and precipitation process for the removal of metals from the electroplating waste streams. The system included waste segregation, flow equalization, neutralization, clarification, filtration and pH adjustment prior to sanitary sewer discharge.
- Frito-Lay Wastewater Treatment Facility, Cambridge. Project manager: wastewater characterization study and design review of the wastewater treatment system for the potato chip manufacturing and packaging facility. Process components included grit removal and clarification using lamella plate settlers prior to sanitary sewer discharge. Residue treatment included equalization and dewatering using a gravity belt thickener.

INFRASTRUCTURE

- Nideva Properties Inc., Oaks of St. George WPCP Servicing Strategy: Provided assessment of wastewater servicing to facilitate development of the lands located on The Oaks of St. George property that is located within the County of Brant in the Community of St. George. The work includes the

design review and capacity of the existing wastewater infrastructure (including wastewater treatment plant and its outfall to Fairchild Creek), and their potential to service the landowners' interests on behalf of Nideva Properties Inc.

- Nobleton SW Landowners Group: Provided wastewater treatment servicing strategy and peer review services with the ongoing Class EA for York Region's Nobleton Wastewater Treatment Plant expansion.
- Tercot Developments, Nobleton North Holdings Development: Provided Peer review services pertaining to water and wastewater servicing for new development parcel within an established community and provided Expert Witness testimony at the Ontario Municipal Board.
- City of Hamilton, Fernbrook Estates (formerly Four Season's Estates) Communal Servicing Default Agreement. Project manager: Assisted the City in negotiations with a developer with a communal servicing default agreement. The work involved a third part review of the design of the water and wastewater treatment plants, pumping stations, sewers and watermains for a trailer park subdivision as well as to comment on the City's requirements with respect to the default agreement.
- City of Hamilton, Stonebrook Estates Communal Servicing Default Agreement. Project manager: Assisted the City in negotiations with a developer with a communal servicing default agreement. The work involved a third part review of the design of the water and wastewater treatment plants, sewers and watermains for a residential subdivision as well as to comment on the City's requirements with respect to the default agreement.
- City of Hamilton, Ponderosa Nature Resort Communal Servicing Default Agreement. Project manager that assisted the City in negotiations with a developer with a communal servicing default agreement. The work involved a third part review of the design of the water and wastewater treatment plants, pumping stations, sewers and watermains for a trailer park subdivision as well as to comment on the City's requirements with respect to the default agreement.
- City of Hamilton, Woodward Avenue Water Treatment Plant. Project director for the design and construction of various road reconstruction projects established under the City's roster system. This work included the widening of the entrance roadway into the Woodward Avenue Water Treatment Plant.
- Provided assessment, design and construction administration support for groundwater treatment systems out-letting to the City of Toronto Sanitary Sewer System. The work involved treating the groundwater down to levels that do not exceed the City's Sewer Use By-law contaminant levels specifically for suspended solids. Individual projects included:
 - Tricon Developments building at 57 Spadina Avenue, Toronto
 - PCL Centre for Addiction and Mental Health Hospital Building B1 at 999 Queen Street West, Toronto
 - PCL Centre for Addiction and Mental Health Hospital Building D1 at 1051 Queen Street West, Toronto
 - Pinnacle International Developments highrise building at 1 Yonge Street, Toronto
 - Pinnacle International Developments highrise building at 5415 Dundas Street West, Toronto
 - Latch Developments building at 3237 Bayview, North York
- Atlantis Resort Palm Island – Infrastructure System; Dubai, UAE. Project manager: conceptual, schematic and overall design development, contract documentation and construction administration for servicing of 100-acre resort, which incorporates 1,200-room 5-star hotel, 800-room 40-staff hotel, 65-acre waterpark and retail village. Work included traffic master planning, road and entrance way design, water storage reservoirs, water and wastewater pumping stations, sewers and watermains (ranging in size from 300 mm to 1,200 mm), vehicular and pedestrian bridges, parking lot designs and complete site grading.
- Mazagan Resort – Infrastructure System, Morocco. Project executive: conceptual, schematic and overall design development and contract documentation for servicing of 1,000-acre resort, which incorporates a 500-room hotel, casino, two 18-hole golf courses and 400-unit residential subdivision. Work included re-alignment of highway, traffic planning, road and entrance way design, water storage, pumping and distribution network, well development for irrigation purposes, wastewater collection, pumping stations and treatment, parking lot designs and complete site grading.