APPLICATIONS

Finding new connections between old challenges

Infrastructure of the future is greater than the sum of its parts: more than just individual assets, they're a holistic system in which solutions work together. As digital technologies create smarter, more connected spaces, clients need to start thinking about how they program their buildings and systems in a much more integrated way.

RVA offers a comprehensive and scalable end-to-end package of applications that can be tailored to facilities of every type, including environmental, industrial, commercial, institutional, specialty, and residential. Combined with our full suite of traditional engineering disciplines, we execute the smallest to largest projects as turnkey solutions.

We work collaboratively with you as an integrated project team to provide solutions that focus on simplicity, innovation, and ingenuity. From building owners, private developers, government, municipalities, and contractors, our applications enable clients to create environments that are more agile and responsive to the needs of its occupants, with better benchmarks for performance and rigorous measurements of efficiency and effectiveness.

Featured projects

WEST THORNHILL FLOOD CONTROL

Client: City of Markham
Location: Markham, ON

INGERSOLL WASTEWATER TREATMENT PLANT

Client: Oxford County
Location: Ingersoll, ON

ROPEC ENVIRONMENTAL CENTRE

Client: City of Ottawa
Location: Ottawa, ON

Electrical

- Classified area design
- Fire alarm system design
- Lighting design
- Medium voltage substations
- Motor Control Centres (MCC)
- Power system studies
- Security system and access control design
- Standby power systems
- Studies and manuals
- Switchgear and switchboards
- Underground and overhead power distribution lines

Geographic Information Systems

- Cartography and interactive web map products
- Data management and validation
- Database design and management
- Esri ArcGIS products (ArcGIS Pro, ArcGIS Online, Survey123, and ArcGIS Field Maps)
- Network analysis
- Remote sensing
- Spatial analysis and modeling
- Survey design for spatial data collection

Instrumentation & Control

- Building monitoring design
- Facility start-up and commissioning assistance
- Fieldbus control system design
- Instrumentation design
- Piping and Instrumentation Diagrams (P&IDs)
- Process Control Narratives (PCNs)
- Programmable Logic Controller (PLC) panel design
- PLC panel Factory Acceptance Tests (FATs)
- PLC panel Site Acceptance Tests (SATs)
- SCADA network design
- SCADA software (FATs and SATs)

Mechanical

- Acoustics
- Air emissions and odour control
- Building automation systems
- Building energy modeling, condition assessments, and energy audits
- Computational Fluid Dynamics (CFD)
- Fire protection
- Fueling facilities
- Generator systems
- HVAC
- District heating and cooling systems

Modeling

- Basement flooding studies and Combined Sewer Overflow (CSO) assessment
- Bridge and culvert capacity assessment
- Class EA and master planning
- Climate change impact
- Dual drainage modeling and capacity assessment
- Floodplain mapping and flood control design
- Hydrant flow tests
- Hydrologic modeling
- Inflow and infiltration assessment
- Sanitary and storm network assessment
- Stormwater management
- Transient modeling
- Treatment plant hydraulics
- Water distribution network modeling

This brochure does not include a full suite of services offered. For a full of list of services under Applications, get in touch with **Tyler Lahti**.

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