



roarengineering.com



Jacob D. Lemcke

Structural Engineering

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Education

UNIVERSITY OF GUELPH

Bachelor of Environmental Engineering

Experience

ROAR ENGINEERING Structural Engineering

2021 – PRESENT

Specializing in structural design for the new construction and structural repair/retrofit of buildings and miscellaneous structures. Routinely perform geotechnical evaluations, investigation of building envelope failures, code consultation and building science engineering, which includes moisture management and environmental remediation (including mould, asbestos and other designated substances), within buildings. Experience in performing Designated Substance Surveys (DSS) and providing remediation protocols.

Duties include site documentation, providing analysis of structural failures in buildings and miscellaneous structures, and preparation of plans and specifications for demolition, reconstruction and/or retrofit.

Assessment of property damage related to fire, explosion, vibration, ground movement, wind load, snow load, flooding, vehicle/tree impacts, water (moisture) infiltration and ice damming. Structural damage investigations and analyses of construction failures of commercial, residential and agricultural buildings, large scale building collapses, agricultural grain bin failures and retaining wall failures. Experience with design and repair of steel moment framed structures.

Assessment of property damage related to violations of current and historic versions of the Ontario Building Code, National Farm Building Code and Occupational Health and Safety Act and Regulations for Construction Projects.

Services provided and duties consistent with present role at Roar Engineering.

TOWN OF WASAGA BEACH
Engineering Intern

2017

Responsible for infrastructure and internal servicing inspection, AutoCAD drawing synthesis, and storm water management design.

- Construction site inspector responsible for:
 - Surveying construction sites and sub-watersheds of environmental concern.
 - Ensuring quality of installed roads, and municipally assumed servicing (water/sewer mains, force mains).
 - Managing communication between the Town of Wasaga and contractor.
- Performed retroreflectivity studies on town signage for pedestrian safety and property maintenance.
- Storm water management through infrastructure implementation and solution design.
- Policy synthesis and traffic studies using road counters.
- Participation in municipal tendering process.

TOWN OF MIDLAND
Junior Civil Engineer

2016

Responsible for traffic studies, inspection of construction sites, Q.A.Q.C., and AutoCAD design.

- Construction site inspector responsible for:
 - Ensuring quality of installed sidewalks, roads, water/sewer mains and sod.
 - Managing communication between the Town of Midland and the contractor.
- Spearheaded a traffic study in which both speed and quantity of vehicles were recorded for information regarding the implementation of traffic calming procedures.
- Designed As-Build drawings based on the final product of several construction projects using Autodesk software (AutoCAD, AutoCAD Civil 3D, AutoCAD Map).

SEVERN SOUND ENVIRONMENTAL ASSOCIATION (SSEA)
Watershed Monitoring Technician

2015

Responsible for collecting water, soil and air samples, performing watershed studies, as well as maintaining and operating research equipment.

- Data Collection of lakes and rivers in the Severn Sound watershed. Data collection methods included the use of: YSI Sonde, Floroprobe, pH/conductivity meters, Zoo Plankton Nets, Kemmerers, T- Samplers(benthos), Tidbit HOB0 software.
- Lead the data collection for 12 Provincial Water Quality Stations (PWQMN) for the Government of Ontario.
- Benthos monitoring and identification.



- Mentored by Mr. Keith Sherman
- Aided in the thorough study of the Wye River water shed.
- Presentations for Township Board Members: SSEA Invasive Species Identification and Elimination (Speaker)

Specialized Professional Competence

NAMP

Certified in Mould Remediation, Assessment and Testing

Memberships

Professional Engineers of Ontario, registered as Engineer in Training (EIT)
Successful Completion of NPPE

Achievements

Severn Sound Environmental Award

2013

