Signalogic Systems inc.
Rail Solutions and Consulting

Professional Capabilities Summary

November, 2026

Registration

Association of Professional Engineers Geoscientists of Alberta (APEGA), 2012

Professional Engineers of Ontario (PEO), 2020

Years Licensed as Engineering Firm- 14

Memberships

American Railway Engineering and Maintenance of Way Association (AREMA), 2012

Experience Summary

Signalogic Systems provides engineering services for the railway signaling industry. President Kevin Rudko has worked in the industry for 24 years in a wide range or roles.

Signalogic Systems Inc brings extensive operational and technical experience in all aspects of design and implementation of freight and passenger railway and transit signals and communications (S&C) systems, including:

- System level and preliminary design.
- Detailed design.
- Operational framework & rules development.
- Maintenance practices development.
- Testing & Commissioning of vital systems.
- Integration of equipment and subsystems into larger functional systems.
- Specifications and standards developments.
- Design and construction oversight.
- Troubleshooting of complex systems
- Simulation and optimization of systems.
- Incident and root cause analysis.

Signalogic Systems Inc is currently registered with APEGA and PEO.

Selected Experience

- **AECOM**
  Subconsultant: Signal Engineer of Record (September 2024 – Present)
  Capital Line South Extension Project (September 2024 – Present) **Progressive Design-Build Project**
  Provide detailed designs for the 3.5 km extension of the existing Capital LRT Line.
  - Develop block designs and top-level functionality.
  - Coordinate with other disciplines to deliver a unified LRT system design.
  - Manage Systems Engineering elements including requirement traceability and interface management.

  Oversee development of detailed designs by AECOM designers.
  - Single-line and Double-line track drawings.
  - Signal room and signal bungalow detailed circuit and layout designs.
  - Civil layouts of all equipment including all signals, track-mounted devices, junction boxes and ducting.
  - Elevation drawings of signal assemblies and wayside structures supporting the signal system.

  Develop Site Query responses.
  Approve shop drawings prior to procurement.

  NE Capital Line Track Rehabilitation Project (May 2018 – Present)
  Provide support for decommissioning elements of live signal system to support track replacement.
  Develop decommissioning and recommissioning procedures.
  - Witness decommissioning and recommissioning activities.

  Design interlocking changes in support to crossover relocation.
  - Develop design documentation.
  - Produce revisions to existing signal room circuit and layout drawings.
  - Modify existing application logic to support changes.
  - Identify and submit control and indication changes for ARINC CTC.
  - Partake in testing and commissioning activities.

  Edmonton LRT Metro Line: Alternative Signalling Project (May 2018 – July 2021)
  Lead full reference design for a replacement signal system.
  - Developed system architecture incorporating axle-counter train-detection with crossing warning systems and wayside signaling system.
  - Design interfaces of various subsystems into one working deliverable.
  - Produce block designs, performance requirements and document.
  - Provides technical knowledge of existing ETS systems and operations.
  - Oversee design-build contract progress.

- **Marigold Infrastructure Partnership (Parsons / Colas Rail)**
  NE Capital Line Track Rehabilitation Project (May 2018 – Present)
  Perform Responsible Engineer responsibilities (APEGA definition) as an external party for signal system supplier Stadler based in Germany.
  - Review all engineering deliverables by Stadler.
  - Provide feedback on engineering outputs where changes are required.
  - Authenticate Stadler designs that are final for their purpose.
  - Provide support for other Marigold resources in support of construction and commissioning.

- **Platinum Engineering (Subconsultant to Associated Engineering)**
  Subcontractor: Signal Engineer (January 2018 – January 2020)
  Edmonton South Capital Line LRT Extension: Prelim Eng: Signals Lead (January 2018 – January 2020)
  Oversee design progress and integrate designs with other design disciplines.
  - Develop system architecture for existing operational patterns as well as novel operating patterns.
  - Review previously prepared designs and reports and produce updated versions.
  - Provides technical knowledge of existing ETS systems and operations.

- **Hatch**

  Subconsultant: Signal Engineer (2018 –2026)

  Edmonton NE LRT Crossing Safety Upgrade (August 2018 – 2026)

  Lead application software development and revisions.

  - Develop site specific applications for eight replacement crossing bungalows.
  - Develop interface to existing signal system including modification of existing application logic to remove previous crossing logic.
  - Develop office control and indication definitions for new crossings.
  - Develop and implement interlocking changes to account for new roadway installation.

- **Siemens**

  Subconsultant: Signal Engineer (January 2022 – 2023)

  Ottawa Trillium Line Extension (January 2022 – 2023)

  Supervisory Engineer

  - Review all levels of Siemens' design and design interfaces at all level of systems engineering V-model.
  - Maintain awareness of project activities as they evolve, ensuring Siemens' deliverables continue to meet project needs.
  - Enforce changes in designs or validation activities to ensure proper design outcomes and safety levels.
  - Provide PEO sealing of final design documents
  - Witness testing activities and review results of test results performed by others.

- **Stantec**

  Subcontractor: Signal Engineer (October 2015 – Present)

  Stadium Stadium Rehabilitation: (August 2019 – Present)

  Develop application logic for the four new pedestrian grade crossings at the station and modify existing signal controller application logic to interface to the new crossings.

  - Coordinate with Stanec signal design team to ensure application logic is consistent with hardware design.
  - Perform engineering reviews of Stantec signal hardware designs.
  - Provides technical knowledge of existing ETS systems and operations.

  Edmonton Northwest LRT Extension: Prelim Eng: Signals Lead (April 2017 – March 2018)

  Oversee design progress and integrate designs with other design disciplines.

  - Develop system architecture for new operational modes.
  - Review designs and provide reports.
  - Provides technical knowledge of existing ETS systems and operations.
  - Provide designs that heavily modify existing signaling system architectures.

  Edmonton North LRT Extension: Thales CBTC Project Management Team (October 2015 - July 2018)

  Monitor contractor progress and escalate contractor to initiate corrective action when necessary.

  - Review and approve contractor work plans.
  - Interface between contractor and customer.
  - Provides technical feedback to enable customer upper management project decisions.

  South LRT Crossing Power Upgrade (February 2016 – March 2019)

  Signal design review and oversight.

  - Review electrical designs performed by others.
  - Provide on-site oversight during installation process.
  - Perform as-built reviews of modified signal locations.

  Muttart LRT Crossing Project (November 2016 – Present)

  Signal design review and oversight.

  - Design site specific drawings and revisions to existing system drawings.
  - Develop site specific application software and modifications to existing software.
  - Provide on-site oversight during installation process.

- **City of Edmonton – Edmonton Transit System** (June 2015 - Present)
  Consulting Engineer: Professional LRT Signal Design Services
  - Developed test programs to verify designs provided by others.
  - Provided advise with regards to maintenance engineering and troubleshooting.
  - Developed signal application revisions and testing plans for the following LRT signal revisions:
  - Cascaded activation of switch machine motors at large interlockings.
  - SLRT functional crossing revisions implementation, including: warning time and pre-emption time optimization, enhanced directional sticks, per-track knife-switches (out-of-service mechanisms), reverse direction support at interlocking signals.
  - Addition of LCP and office indications pertaining to crossing and interlocking functions.
  - Crossing case replacement with relocated bungalow for sightline issues.
  - Optimize block overlaps at critical locations to improve operational resilience.
  - Optimize junction operation.

- **Modern Railway Systems -** (June 2015 - August 2015)
  Simulation Specialist
  - Developed a comprehensive simulation using Vital-Sim VSLS signalling simulator enabling MRS to validate a Positive Train Control deployment including the implementation of the office dispatch system.
  - Travelled to the MRS customer's office to facilitate presentation and explanation of the simulation.

- **Siemens Industry - CN Signal Application Logic Development** (October 2014 - April 2015)
  Subcontractor: Signal Application Engineer
  - Responsible for the development of site-specific application logic based on existing customer application standards and patterns.
  - Designs are delivered to Siemens for their further testing and deployment to the customer.
  - CN: GO Transit Lakeshore West Expansion: Ontario, CANADA
  - Stuart & Dundurn Interlockings: GEO application logic.
  - CN Durand Interlocking Replacement Project
  - Clare & Durand Interlocking: ElectroLogIXS application logic.

- **Thales Rail Solutions, Edmonton North LRT Extension Project** (May 2012 - August 2015)
  Subcontractor: Signal Application Engineer
  - Work involves development and delivery of a vital interface between the new Thales CBTC equipment and the existing GETS ElectroLogIXS vital signal logic controllers comprising the existing Edmonton Transit System LRT signal system.
  - This position is directly responsible for the design, provision of signal engineering, and technical / commissioning support of the interface architecture.

- **North Link Partnership –NLP (joint partnership between SNC Lavalin / Graham Construction) – Edmonton North LRT Extension Project** (May 2012 - February 2015)
  Subcontractor: Signal Application Engineer
  Deliver construction ready signal drawings and software to modify existing LRT line to accommodate new junctions.
  - Work involves providing staging support including: CADD file revisions, application logic revisions, test plan reviews, and general North American signaling practices consultation.
  - Work largely involves revisions to in-service application logic of the existing GETS ElectroLogIXS vital signal controllers comprising the Edmonton Transit System LRT signal system to accommodate additionally mainline features pertaining to the North LRT extension.
  - Since ETS had no junctions prior to this project, development of new operational requirements for the two junctions that fit within the ETS operational rulebook and standards was required.
  - Direct responsibility for the design, provision of signal engineering, technical / commissioning support and ETS training for the deployment of revisions to the existing ElectroLogIXS based signal system.