

# Design Engineer, Integrated Security

PBX Engineering is an electrical, systems, and software engineering firm in British Columbia & Alberta. We develop leading edge systems for municipal infrastructure, transportation, security, buildings, and industrial applications across Canada and the United States.

PBX is looking for a **Design Engineer** to work with the **Network Systems** team, under the **Integrated Security** Business Unit, and other engineers in delivering projects in BC and across Canada.

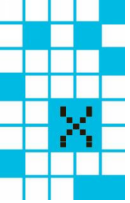
Projects in the Integrated Security Business Unit commonly focus on the design of enterprise security solutions meeting the highest regulatory standards, for facilities such as power authorities, marine terminals, airports, correctional centres, transportation facilities, and control rooms.

The Network Systems team is responsible for assessing, planning, designing, configuring, testing, hardening, and implementing new and existing communications networks comprised of copper, fibre optic, and wireless technologies. The role of Network Systems Design Engineer will also support network design and implementation for non-Integrated Security projects, including transportation, automation, buildings, and municipal systems.

## Position Summary

Working closely with other engineers, the **Design Engineer** will be a key member of the **Network Systems** team, with responsibility for project tasks in the following areas:

- Coordinate, contribute to, and/or prepare project documentation as required to deliver projects, including (but not limited to):
  - Network architecture and IP schemas
  - Network configuration plans
  - Capital cost estimates
  - Reports, requirements, technical memos, specifications
  - Calculations and simulations
  - Logical and physical network design drawings
  - Test plans, manuals, training material
- Development of design documentation including Concepts of Operations, Use Case assessments, and Functional Requirements
- Participation in design development and design review meetings with clients and other stakeholders
- Preparation of configuration and test plans
- Travel to site locations and on-site work as required, including installation, commissioning, and troubleshooting tasks.
- Pre-configuration of network equipment prior to site deployment
- Performing on-site system audits
- Performing on-site device and network hardening



- Creating and maintaining detailed network documentation
- Other duties as may reasonably be assigned
- Efficient and effective implementation of all of the above, undertaken in a professional, courteous, and respectful manner

## Qualifications

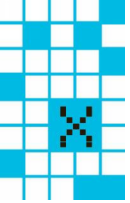
While in addition to experience with the above responsibilities, the qualifications for the position include:

- Degree in Electrical Engineering from an accredited university, or diploma in Electrical Engineering Technology program or equivalent from a recognized technical institute
- Eligible for registration with either ASTTBC (Applied Science Technologists and Technicians of BC) as an ASCT.; or eligible for registration with EGBC as an EIT/P.Eng.
- Familiarity with TCP/IP protocols, OSI network model, network block symbols, network datagram types, and physical communications media
- Familiarity with network device configuration using command line (eg. Cisco IOS) and GUI interfaces (eg. Cisco ASDM/NGW, SonicOS, and FortiOS)
- Proficiency with network subnetting, supernetting, and NAT
- Familiarity with network redundancy and load-balancing (LACP, RSTP, HSRP)
- Familiarity with cybersecurity fundamentals (eg. Defence-in-depth, DHCP snooping, MAC filtering, and dynamic ARP inspection)
- Familiarity with unicast, multicast, anycast, and broadcast IP routing
- Strong understanding of computer architecture (servers, storage, workstations, and user interfaces)
- Aptitude for understanding how sub-systems can integrate
- Strong computer skills including excellent working knowledge of the MS Office suite
- Exceptional oral and written communication skills
- Exceptional organizational ability and attention to detail
- Effective interpersonal skills and a positive, professional attitude
- Strong willingness to take initiative and a self-starter attitude
- Ability to deal effectively with a high level of responsibility and demanding work schedule
- Ability to work independently and use initiative to ensure tasks are completed effectively and on time
- Ability to work, for limited time periods, in noisy or harsh site project environments

## Assets

Knowledge of the following areas are not mandatory, but are considered an asset to the position:

- Aptitude for technical writing, including reports, memos, and professional email correspondence
- Experience in the design of enterprise security systems
- Familiarity with the following network tools:
  - Ping, tracert, arp, netstat
  - Wireshark
  - Cisco packet tracer
  - SolarWinds
- Familiarity with IEC62443 and NIST CSF cybersecurity frameworks



- Familiarity with virtualized server environments (VMWare or HyperV)
- Familiarity with software defined networking principles (Northbound/Southbound API, SDN planes)
- Working knowledge of wireless or cellular networks
- Working knowledge of the Canadian Electrical Code
- Working knowledge of applicable provincial, national and international standards for network systems
- Working knowledge of BC construction standards and regulations.
- Good understanding of hardware and software system integration and compatibility.

## Benefits & Other Compensation

We provide a comprehensive benefits package that promotes employee health and wellness which includes the following:

- Medical, Dental, & Vision Benefits, including short and long-term disability, and life insurance
- Paid time off, including paid holidays, Sudden Illness, Injury & Childcare (SIIC) days
- A Maternity & Parental Leave Top Up Program
- Registered Retirement Savings Plan (RRSP) with company matching
- A Fitness & Wellness Incentive Program
- An Employee Assistance Program
- Annual bonus program based on company and personal performance

## Applications

Qualified applicants are encouraged to send their resumes, complete with references, via email to [careers@pbxeng.com](mailto:careers@pbxeng.com). Include “Design Engineer, Integrated Security” in the subject line.

Resumes will be accepted until position filled.

## About PBX

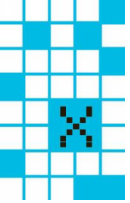
PBX Engineering offers a challenging and rewarding environment. PBX employs innovative, critical thinkers who enjoy solving problems through creative and collaborative interaction. The selected candidate should be genuinely interested in participating in the mutually beneficial growth and technical development of a very strong and talented group of engineers, designers, finance, and operations personnel.

Our services cover the full project life cycle – from high level planning to splicing wires and testing devices, from the conference room to the construction site.

We support clients and partners with projects ranging in size from small to very large, and in scope from stand-alone to highly integrated.

Our work includes projects that matter on municipal, provincial, and national levels – ports, terminals, ferries, roads, bridges, hospitals, water infrastructure, airports, tunnels, recreational facilities – all the critical things that build strong economies, industries, and communities.

We believe in supporting the long-term career development of our staff through a diverse and challenging workload, industry engagement, and internal and external training. We apply the same effort in fostering a positive social



environment as we do in developing innovative and successful projects. We continuously strive to make our firm the kind of place where people want to stay – and our benefits package and approach to compensation are structured to support that goal.

PBX is also honoured to make the list of [Canada's Top 100 Small and Medium Enterprise Employers for 2023!](#) Click [HERE](#) to read about the reasons PBX was selected.