TECHNICAL EVALUATIONS
of NORTHERN FACILITIES

What is a Technical Evaluation?

A technical evaluation is a process, developed by the Department of Public Works and Services, to report on the condition and performance of architectural, structural, mechanical and electrical systems, subsystems and components in buildings and works facilities.

Recommendations based upon the Good Building Practice guidebook, the National Building Code and other regulatory agencies are included in the report. It provides sufficient information for program and facility planners, designers, builders and operators to know which systems, subsystems, components and materials are at or near the end of their economic service life, and may be in need of repair or replacement. As well, the report outlines how operating methods can be corrected to make facilities safer, more comfortable, more energy efficient and more durable.

Facilities We Evaluate

Buildings: Schools, hospitals, health centres, air terminal buildings, libraries, warehouses, garages, water treatment plants, community halls and office buildings, group homes, recreation facilities, research institutes and correctional facilities

Works: Water supply and distribution, waste water collection and disposal systems, water and sewage treatment plants, truck fill stations, and water storage facilities

Fuel storage and distribution facility evaluations include design reviews, on-site inspections, code and standards investigations

Granular materials evaluations

TECHNICAL EXPERTISE NORTH OF 60°

Technical Support Services
What can a technical evaluation do for you?

**Status Evaluations**

Status evaluations are conducted on buildings to assist owners in prioritizing their buildings with respect to proposed renovations, additions, or replacements. The investigation considers all of the building systems, subsystems, and components. The status evaluation considers only the technical aspects of the building; however, it can be conducted in conjunction with a functional analysis of the building by facility planners.

An evaluation can also be done in the project planning stage, for example, when establishing budgets and capital plans. Additionally, code upgrades, life safety concerns, and operational and maintenance requirements can be identified well in advance of starting the design and committing capital dollars.

Extensive on-site inspections by our team of experts is coupled with historical research on the facility and analysis of operational data (energy consumption, thermal loss, air quality, etc.), resulting in a comprehensive 50-100 page report.

**Performance Evaluations**

A performance evaluation considers whether the building and systems:
- were constructed properly
- are being operated and maintained properly
- are subject to premature failure

The report includes details on observations made, measurements and data recorded, maintenance concerns, life and fire safety issues, and supporting photographs.

Often a performance evaluation is conducted in conjunction with a post-occupancy evaluation, which includes a functional evaluation of the building spaces and their suitability to the occupants and users.

**Problem Evaluations**

Having a problem with your building? We can do a ‘problem evaluation’, which includes an on-site investigation into a specific problem affecting the building and/or its occupants. Common problems we can solve include:
- Poor indoor air quality
- Building envelope problems (e.g., vapour barrier, air barrier, moisture and condensation problems)
- Excessive heat loss (using thermal scanning analysis)
- Building structural problems
- Heating, ventilation and temperature control problems
- Lighting level complaints
- Power-related problems including power consumption concerns

The report includes findings, recommendations and related cost estimates, and supporting photographs.

**Remainder Service Life:**

Refers to the remaining cost-effective service life of the system or component, under normal operating conditions and with proper maintenance.

**Recommended Action Priorities:**

Refers to the urgency of the recommended action. The urgency reflects the importance of the recommended action to the element’s safety, cost-effective operation, or service life.

**Performance Rating:**

Refers to how well the identified element conforms to technical performance requirements or to standards called for in codes, to standards and guidelines for design and construction quality, and to operating and maintenance standards.

**Commissioning Evaluations**

A commissioning evaluation is performed at the completion of construction, typically prior to turn over to and occupancy by the owner. The decision to do a commissioning evaluation on a building may be based on the dollar value or complexity of the project, or on the critical nature of the building (for example, a hospital, health center or school).

The commissioning evaluation verifies that the systems and components have been constructed in accordance with the design, that they operate and/or function as the design intended, and that operations and maintenance personnel have been properly trained. Detailed testing, measuring and inspection of the building systems are also included in the commissioning evaluation.

A commissioning evaluation may be conducted as part of or in conjunction with the final inspection and start-up of systems in the building. The commissioning evaluation report is prepared in a format similar to the performance evaluation report, with each building system and/or subsystem itemized and rated.
Municipal Engineering

The evaluation can include water sampling and analysis, solving water quality problems, performing pilot studies, troubleshooting, design reviews, water system analysis, water treatment plant optimization, facility operator training and research, and selection of best available technology for water treatment systems.

Maintenance Inspection

Examination of Log Sheets to verify Code compliance for the maintenance, inspection and testing of Fire Alarm Systems, Generators, Fire Pumps, Extinguishers and Boilers.

Review of Life Safety practices that impact the fire safety, egress, and basic safety of the occupants and the public. Overview of operation of facility hardware and installed systems.

Granular Materials

Provide assistance to identify and develop granular sources, select granular materials, develop granular source management plans, recommend granular production alternatives, prepare granular investigation reports, and manage related land claims issues.

WHO ARE WE?

Technical Support Services is a group of professionals with extensive training and experience. We provide technical assistance to communities, program departments, project management teams, boards and agencies in the planning, design, construction, operation and maintenance of buildings, including:

- Architectural/Structural
- Mechanical
- Electrical
- Municipal water and sanitation services
- Granular resource management

Technical Support Services is part of the Asset Management Division of Public Works and Services, GNWT, located in Yellowknife.

Want to arrange for a Technical Evaluation on your building(s)?

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