

PIPELINE CONSTRUCTION INSPECTION: WORKFORCE FACTS

SKILLS FOR SUCCESS

The Canadian government identified nine skills that individuals need to succeed in a quickly changing world¹:

- Problem Solving
- Collaborating
- Communicating
- Reading
- Digital Skills
- Numeracy
- Continuous Learning
- Writing
- Document Use

FAST FACT:

Pipeline construction inspectors must be observant and detail-oriented, with good communication and problem-solving skills.

REFERENCES

¹ Employment and Social Development Canada (2021). *Learn about the Skills*. <https://www.canada.ca/en/services/jobs/training/initiative/skills-success.html>

² Jiva Consulting. (2019). *Pipeline construction inspection benchmarking survey*.

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What Skills Does an Inspector Need?

JOB DESCRIPTION

A pipeline construction inspector is the pipeline owner's on-site representative during pipeline construction and maintenance activities. The inspector's role is to oversee construction activities and ensure that the work is carried out according to the pipeline owner's specifications.

To broadly describe the type of work an inspector does, the most common verbs in the *Practical Guide to Pipeline Construction Inspection*, an industry guidance document, are listed in (Figure 2). Based on the words in this list, inspectors spend much of their time observing, recording data, and communicating.

Communicate	Inspect	Object
Complete	Itemize	Record
Confirm	Maintain	Report
Ensure	Monitor	Track
Identify	Observe	Verify

Figure 2. The most common verbs in the *Practical Guide of Pipeline Construction Inspection*.

TECHNICAL SKILLS

There are specific competencies, skills, knowledge, and abilities needed in the Pipeline Construction industry. Pipeline construction inspectors are expected to have the following:

- A good understanding of the pipeline construction process
- API 1169 certification, which requires knowledge of safety management systems, pipeline construction inspection, environmental protection requirements, and pipeline construction safety
- Safety certification, such as First Aid, WHIMIS, Transportation of Dangerous Goods, and Level 2 Ground Disturbance Supervisor Training
- Canadian Language Benchmark 7 for listening, speaking, reading, and writing

- Experience using Google Maps (or equivalent) to navigate to a worksite

ESSENTIAL SKILLS FOR SUCCESS

In a 2019 survey², 100 pipeline construction inspectors rated their abilities to perform each of the nine essential skills identified by the Canadian government¹ (see sidebar). Based on their responses, the skills pipeline construction inspectors believe they are most proficient at are problem solving, collaborating, and communicating (Figure 1). They are less proficient at digital skills, continuous learning, and writing.

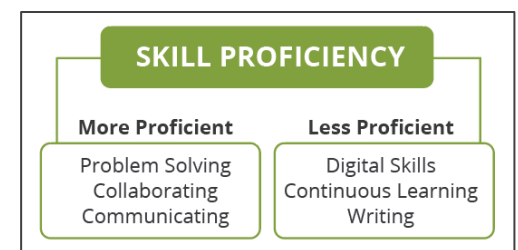


Figure 1. Self-reported skill levels of pipeline construction inspectors.

Based on these self-reported strengths, it can be inferred that problem-solving, collaborating, and communicating are important to being a successful inspector. Similarly, the self-reported weaknesses are likely less important skills for inspectors.

SKILLS FOR THE FUTURE

In the future, the core skills identified above are unlikely to change; however, the evolution of the industry will create a need for additional skills. For example, the energy sector is becoming more reliant on digital technology. Inspectors who wish to remain marketable and in demand will need to maintain or improve their digital fluency.