

Job Class Profile: Materials Inspector III

Pay Level: CG-36 Point Band: 790-813

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	5	4	4	5	4	4	4	6	4	
Points	233	67	25	24	120	87	83	129	43	811

JOB SUMMARY

The Material Inspector III is responsible for providing advanced quality control and technical support for staff involved in inspecting, sampling and testing materials used in highway maintenance and road construction to ensure specialized requirements are met. Performs supervisory responsibilities, including laboratory staff, and conducts training to staff in proper testing processes.

Key and Periodic Activities

- Ensures quality control by directing the inspection, sampling and testing of materials used in highway maintenance and construction.
- Provides supervision, technical support and training to laboratory and other staff.
- Conducts progress inspections and final sampling and testing procedures.
- Deals with issues/problems relating to specifications, materials and equipment used by contractors.
- Ensures reports and other documentation relevant to each project is completed.
- Schedules and assigns staff.
- Facilitates meetings between staff and clients.
- Conducts safety meetings.
- Source approvals for all jobs/activities.
- Provides assistance to engineers with pre-tender work.
- Provides assistance to management regarding specification changes.

SKILL

Knowledge

General and Specific Knowledge:

- Knowledge of up-to-date testing procedures and methods and construction specifications.
- Specific knowledge of inspection techniques and procedures and new materials.
- Knowledge of quality control and quality assurance programs.

Formal Education and/or Certification(s):

- Minimum: 3 year Specialized Post-Secondary Diploma in Civil Engineering Technology.

Years of Experience:

- Minimum: 10 years.

Competencies:

- Supervisory abilities.
- Quality control.
- Ability to calibrate and repair machinery.
- Safe operation of motor vehicle.
- Ability to operate a computer.
- Written communication skills.

Interpersonal Skills

- A wide range of interpersonal skills are used such as listening, asking questions, providing routine and specialized information when interacting with staff and contractors involved in highway maintenance and construction, teaching and training of staff in proper testing procedures and methods is required. dealing with contractors on issues related to testing results or changes in specifications; periodically may have to resolve disputes; and from time to time facilitating meetings and making formal presentations.
- Communications occur with peers, employees, managers, contractors, students/trainees and internal departmental executive.
- The most significant contacts are with: supervisor/manager to provide updates; employees to assign work and perform supervisory responsibilities; contractors to deal with changes or discuss issues.

EFFORT

Physical Effort

- The demands of the job can result in considerable fatigue, requiring periods of rest.
- Lifting or moving objects or physically handling materials between 25 – 50 lbs. such as gravel and asphalt samples is a regular occurrence. Occasionally moves equipment for compaction (i.e. gauges and core machines weighing more than 50 lbs. to and from various job sites).
- Driving is required for extended periods of time. Standing, walking and climbing are also a regular occurrence when performing job site visits.
- Using hand tools that require accurate control and steadiness and the use of gross motor skills for walking and other activities also occur on a regular basis.

Concentration

- **Visual, auditory** and other sensory demands such as **touch** and **smell** are present on a regular basis when ensuring the safety of others on the highway, reading and interpreting calculations for accuracy, listening for trucks or heavy equipment, being cognizant of hot surfaces during inspection, such as asphalt ovens and detecting propane gas leaks.
- Preparing representative samples and report writing require **eye/hand coordination**.
- Activities such as driving, operating testing equipment and paperwork can be **repetitious and require alertness**.
- Regularly requires a **high level of attentiveness/alertness** when collecting samples near

highway traffic and around heavy construction equipment.

- **Time pressures and deadlines** are experienced when testing and reporting results of samples to engineers and contractors. Such tests have to be conducted within specified timelines.
- **Lack of control over work pace** is usually dictated by requirements at various job sites.
- **Exact results and precision** are regular requirement when ensuring that calculations and testing are performed in accordance with standards and ensuring quality control.

Complexity

- Tasks and activities may be different, but allow the use of similar skills and knowledge. Activities range from providing training to staff in the use of proper procedures; ensuring standards are met; and quality control to resolving issues with contractors pertaining to testing results.
- Challenges/problems/issues must be defined and practical solutions found. A typical problem encountered is dealing with asphalt mixes. There could be a variety of reasons why problems arise, such as voids, tar or work ability. Solutions must be determined and fall within the departments specifications.
- Reference material available include specification book, Canadian Standards Association (CSA) and the American Society for Testing of Materials (ASTM).

RESPONSIBILITY

Accountability and Decision-Making

- Work is usually performed independently and judgement must be used to interpret results and recommend corrective action.
- Without formal approval, can accept or reject crushed material, access pavement test results and report to engineer any deficiencies, alter settings at asphalt plant and crushing operations to receive proper mix.
- Supervisory approval is required to change mix designs.
- A high degree of discretion is exercised in interpreting specifications or when accepting the use of course materials outside of the specifications when the placement of materials is over set and soft ground.

Impact

- Impacts generally affect the department, with customers/clients/general public and with external stakeholders such as contractors.
- Work activities impact finances, equipment, processes, systems, human/material resources (i.e. if a mistake is detected, then a job must be halted, resulting in extra cost to the department), information, facilities, and health and safety. Testing determines whether or not materials will be accepted or rejected.
- The consequences of a mistake or error can impact the organization, the contractor and the general public. While clear instruction is provided to staff through the department's specifications and procedures manuals, there is some discretion used for interpreting specifications and accurate testing is critical.

Development and Leadership of Others

- Typically responsible for direct and ongoing bargaining unit supervisory activities for a large size work group of employees (>10 employees).
- Development and leadership responsibilities include the provision of advice, guidance, on-the-job direction, feedback, input into performance assessments, on-the-job training, acting as a technical mentor, building morale and employee relations, delegating/allocating tasks, leading a project team, providing input to others about staffing and recruitment, organizing and coordinating other colleagues and checking or reviewing the work of contractors.

WORKING CONDITIONS

Environmental Working Conditions

- Safety equipment such as safety vests, hard hats, steel-toed boots, goggles, ear protection, gloves, and splash apron is required. Other precautions include fire extinguishers, eyewash stations, pylons, truck mounted lights, and flag person/signs.
- There is limited likelihood for injuries or illnesses resulting from hazards if normal precautions are followed.
- Travel to job sites is required to monitor and review field staff testing procedures and results. Often times, these are in isolated areas of the province.
- There is regular exposure to unusual/distracting noise, dirt, dust, glare, fumes, limited ventilation and lighting, hazardous chemicals, toxic or poisonous substances, odours, wet or slippery surfaces, temperature extremes, adverse weather conditions, heavy machinery, physical dangers and sharp objects is experienced when visiting job sites.