



## **IDENTIFICATION**

<b>Department</b>	<b>Position Title</b>	
Infrastructure	Highway Maintenance Operator	
<b>Position Number</b>	<b>Community</b>	<b>Division/Region</b>
33-9034	Yellowknife	North Slave Region

## **PURPOSE OF THE POSITION**

The Highway Maintenance Operator is responsible for operating a variety of equipment and using appropriate tools and materials to maintain the highway system and other related infrastructure to their design capacity to enable the safe and reliable operation of the highway in accordance with established Federal and Territorial standards and regulations.

## **SCOPE**

This position reports to the Highway Maintenance Supervisor. The position works out of a Highway Maintenance Facility responsible for the maintenance of highways, access roads and the construction and maintenance of ice and winter roads. Occasionally the incumbent may be required to assist with highway maintenance operations in areas other than its home base. The primary clients are the users of the transportation system.

The Highway Maintenance Operator primarily maintains all asphalt and gravel surfaces, signs, right-of-way, drainage system and ancillary infrastructure. Due to the extensive worksite area, the incumbent is given the latitude to choose the appropriate course of action and is expected to make decisions and initiate work without close supervision. The duties of the position provide final results that directly affect the operational safety of the system. The incumbent is required to follow approved practices and to make the correct decisions regarding methods and materials to be used, to ensure mitigation of risk of liability, property loss and personal injury. The incumbent routinely operates equipment valued in excess of \$600,000.

The incumbent will be required to work a seven days on/seven days off shift rotation for approximately six months during the winter maintenance season to ensure continuous coverage and timely response to winter road conditions.

This position is designated as part of the organization's Operational Requirement framework, which includes Essential and Critical Staff roles to ensure highway maintenance and safety.



## **RESPONSIBILITIES**

### **1. Monitors the highway, operates mobile equipment, and uses various tools and materials to maintain the asphalt and gravel surfaces, signs, right-of-way, drainage system and other ancillary infrastructure using due diligence to ensure compliance with Federal and Territorial standards and regulations to ensure the safe and reliable operation of the highway system.**

- Operates heavy equipment (grader, sander, loader, plow truck, etc.) to remove snow and ice to improve the safe movement of traffic.
- Applies the most effective product among available friction enhancing and de-icing/anti-icing materials to improve traction to acceptable levels.
- Conducts inspections and implements corrective action if required to ensure the public is not subjected to unsafe and unadvertised conditions that could affect the safe operation of vehicles on the highway.
- Monitors the condition of the highway system and makes recommendations to the supervisor about deficiencies and corrective action required to maximize the useable life of the infrastructure.
- Operates heavy equipment (grader, crawler tractor, loader, backhoe, water truck, dump truck, tilt trailer, compactor etc.) to repair structural grade failures and surface deficiencies of the highway as well as the replacement of culverts and the construction and clearing of drainage ditches.
- Operates heavy equipment to reshape, compact and replace the highway gravel surface to improve the ride quality and extend the useable life of the infrastructure.
- Operates heavy equipment (chip spreader, dump truck, oil distributor, compactor, loader etc.) and uses hand and power tools for the patching of asphalt surface deficiencies to improve ride quality and extend the useable life of the infrastructure.
- Installs, replaces, and maintains highway signs, markers, guide rails and other traffic control devices to ensure driver information and safety structure requirements are met and to enhance safety and ensure compliance with standards and regulations.
- Using heavy and light equipment and small tools to perform landscaping, litter control, seeding, mowing, and clearing of the highway right-of-way to improve esthetics, maintain safe sight distance and to reduce hazards resulting from wildlife crossing the roadway.
- Prepares highway maintenance materials (asphalt mixes, winter sanding aggregates, chip sealing aggregates etc.) to acceptable and established specifications by using appropriate materials, tools, and equipment to ensure the availability of required products.
- When requested, uses appropriate equipment and tools to construct and maintain seasonal winter roads integral to the highway system to permit safe passage of public vehicles over frozen bodies of water and natural terrain.



- 2. Follows the Preventative Maintenance Program for mobile equipment and ancillary infrastructure to ensure design capacity is maintained and expected life cycle is attained to reduce the cost of replacing the infrastructure and to ensure minimum 'out of service' time.**
  - Performs inspection of equipment prior to use to ensure equipment is safe to operate and to ensure deficiencies are noted and corrected.
  - Identifies repairs required and completes all required equipment deficiency and maintenance records.
  - Completes work activity and equipment use records to enable the full accounting of work accomplished and equipment usage for management purposes.
  - Cleans equipment, performs minor repairs and servicing, and assists mechanic with major repairs to ensure 'out of service' time is reduced.
  - Performs visual inspections, minor repairs and maintenance of ancillary infrastructure and makes recommendations to supervisor for corrective action.
  
- 3. Performs other tasks, general maintenance and assists other Department Divisions in the repair and maintenance of infrastructure to ensure safe and reliable transportation system operations.**
  - Will act as a lead hand or crew leader as required when several crews are working in remote and different locations, in the beat the maintenance supervisor must rely on the leadership capacity of the equipment operator.
  - Accomplishing the work to keep the highway system safe is a priority and assuming leadership tasks is required regularly.
  - Assists other trades and staff members (electrician, facility maintainer, welder, airfield maintenance specialist, etc.) as and when required to improve the operational efficiencies and effectiveness of transportation systems.
  - Performing labor tasks such as shoveling, sweeping, lifting, and carrying loads where necessary to perform or complete maintenance functions that large equipment or power tools are unable to accomplish.
  
- 4. Comply with the employer's Occupational Health & Safety (OHS) program and place the safety of the incumbent, the public, other staff, and the company's resources first.**
  - Actively adopt a safety-first approach when conducting any work activities
  - Participate in the Department's OHS program and follow company safety policies.
  - Look out for worker's safety and the safety of company resources, bringing any safety concerns or improvement ideas to the attention of the Highway Maintenance Supervisor.



## **WORKING CONDITIONS**

### **Physical Demands**

The physical demands of the incumbent require occasional heavy lifting and extended hours driving equipment or trucks on gravel surfaces and in rough ditches. Frequency is 3 times per week and the duration is 1 hour per occurrence. Intensity is high.

### **Environmental Conditions**

The incumbent is expected to work outdoors when not operating equipment and is therefore exposed to seasonal weather extremes, dusty highway conditions and public traffic. Frequency is 2 times per week and the duration is 4 hours per occurrence. Intensity is moderate. Exposure to temperatures of -40 C for up to 30 minutes or more due to breakdowns or maintenance of equipment is not uncommon.

The incumbent has daily exposure to hazardous material such as gasoline, propane, diesel, fuel, lubricants, and is occasionally required to use hand and power tools. Frequency is daily and duration is 1 to 2 hours per day. Intensity is moderate.

### **Sensory Demands**

Extensive need for sensory attention to safely operate and control equipment, use various attachments and materials, usually operating on surfaces that are wet, slippery, snow covered or dirty. Frequency and duration are the majority of the time. Intensity is moderate.

When using power tools or operating equipment, the incumbent relies considerably on their sensory feedback to avoid accidents and accomplish the work.

### **Mental Demands**

During the winter road, the incumbent will be required to work a seven days on/seven days off shift rotation for approximately six months to ensure continuous coverage and timely response to winter road conditions.

Occasionally, the incumbent deals with highway accident scenes that can cause additional mental stress.

Occasionally, equipment operation is required when the highway and visibility is extremely poor, and there is a possibility of ground-engaging equipment digging into the surface, causing equipment to come to an abrupt halt or change direction of the vehicle instantly. Frequency is 10 times per year, and the duration is 8 hours per occurrence. Intensity is high.



### **KNOWLEDGE, SKILLS, AND ABILITIES**

- Knowledge of the generally accepted methods of removing snow, controlling ice and the repair of deficiencies on asphalt and gravel surfaces to recognize and perform the maintenance duties of a highway system to ensure compliance with Federal and Territorial standards and regulations.
- Knowledge of and skill in the servicing and minor repair of heavy trucks and equipment to maintain the reliability of the vehicles and to ensure the expected useable life of the machinery is attained.
- Ability to act as a leader for a work crew to ensure equipment and labor delivering the work program is used in a safe and efficient manner using planning and organizational skills to coordinate the various work activities and being self-directed.
- Ability to work without supervision using specialized technical skills and knowledge to make rational and reasonable decisions in the effective use of labor, equipment and materials for highway maintenance purposes and avoidance of situations that can result in property loss and damage or personal injury.
- Skill in the operation of heavy trucks, heavy and light mobile equipment, and power tools to enable the incumbent to be proficient in accomplishing the required highway maintenance functions.
- Ability to communicate in English verbally to ensure accuracy and understanding of messages given and received using mobile two-way radio communications.
- Ability to communicate effectively in written English to perform administrative tasks, understand equipment operation and service manuals, training manuals, correspondence and department directives and policy.
- Working knowledge of basic computer skills generally required to send & receive emails and enter data into an electronic timecard.
- Ability to acquire a Workplace Hazardous Material Information System (WHMIS) certificate and First Aid and CPR Certificate.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion and cultural awareness, as well as safety and sensitivity approaches in the workplace.

### **Typically, the above qualifications would be attained by:**

A grade 10 education and:

- Three (3) years of experience operating heavy equipment in highway and community environments where public traffic is present, which includes:
  - Two (2) years operating 3- and 5-axle tandem trucks, graders and wheeled loaders,
  - One (1) year operating Class 1 vehicles and excavators, and
  - Two (2) years performing minor servicing and maintenance on equipment.

Equivalent combinations of education and experience will be considered.



### **ADDITIONAL REQUIREMENTS**

- A valid class 1 driver's license at time of hire.
- Ability to attain WHMIS Certification within 3 months of hire.
- Ability to attain First Aid and CPR certification within 3 months of hire.

### **Position Security** (check one)

- No criminal records check required.
- Position of Trust – criminal records check required.
- Highly sensitive position – requires verification of identity and a criminal records check.

### **French language** (check one if applicable)

- French required (must identify required level below)

Level required for this Designated Position is:

ORAL EXPRESSION AND COMPREHENSION

Basic (B)  Intermediate (I)  Advanced (A)

READING COMPREHENSION:

Basic (B)  Intermediate (I)  Advanced (A)

WRITING SKILLS:

Basic (B)  Intermediate (I)  Advanced (A)

- French preferred

### **Indigenous language:** Select language

- Required
- Preferred