



**Skilled
Trades**
Ontario

**Métiers
spécialisés**
Ontario

Apprenticeship
Training Standard
Logbook

**Heavy Equipment
Operator - Excavator**

636B

Apprenticeship Training Standard

The Apprenticeship Training Standard or herein after referred to as “Logbook” is a document issued to Apprentices who sign a Registered Training Agreement in the Province of Ontario as an official record of training. It is to be used by the Apprentice and Sponsor/trainer to guide the process of skills development in a particular trade.

Training As An Apprentice

- ✓ Ensure you, your sponsor, and your witness sign a Training Agreement with the Ministry of Labour, Immigration, Training and Skills Development. Once it is registered, you will receive a copy of the registered Training Agreement for your records.
- ✓ Notify the local Service Delivery Office **immediately** if any changes to contact information or training agreement, especially if you change sponsors.
- ✓ Review the Logbook regularly with your trainer and sponsor to discuss your progress, ask questions, seek feedback and have the trainer **sign off on competencies**
- ✓ Keep an accurate record of the hours you work.
- ✓ Attend classroom training when it is offered.
- ✓ Apply for the financial incentives for which you are eligible.



Completing Your Logbook

- ✓ **Complete the Sponsor Record Form** – A form must be completed for each Sponsor/Trainer used during your apprenticeship.
- ✓ **Confirm Skill Sign-off is Complete**
 - **You and your trainer** sign-off each required skill to confirm that you have demonstrated competency in that skill.
 - Shaded boxes in your Logbook mean the skills are optional and do not have to be confirmed by your trainer or sponsor. However, you are encouraged to complete them as part of your training.
- ✓ **Confirm Skill Set Sign-off is Complete**
 - After you and your trainer have signed-off all the required skills in a skill set, your sponsor signs the signature box on the form in **Appendix C – “Skill Set Completion for Sponsors”** to confirm your completion of all competencies within each skill set.

This document is the property of the apprentice named inside and represents the official record of your training. For information about completing your apprenticeship, see inside of back cover.



Apprentice Name: _____

Address: _____

Phone Number: _____

Email Address: _____

Trade: _____

Training Agreement # (for Compulsory and Non-Compulsory trades):

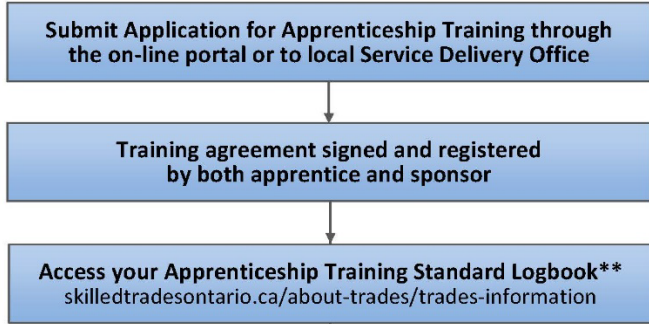
STO Account No. (for Compulsory trades only):

This document is the property of the Apprentice named herein and represents the official record of their training.

If you have questions about the use of this Logbook or about your Apprenticeship program, contact your local Service Delivery Office (see Appendix D in this book) or the Employment Ontario hotline at: 1-800-387-5656.

Apprenticeship Pathway to a Certificate of Qualification

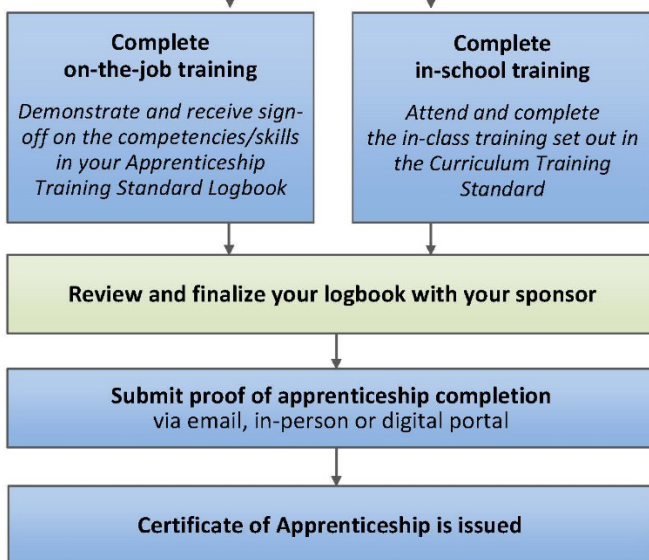
Phase 1: Registration



For on-line portal, please follow instructions for registration. You will need to create a My Ontario account to access online services.

** This is the official record of your training progress. You are responsible for keeping it up-to-date.

Phase 2: Apprenticeship



Apprentices eligible to apply for apprenticeship incentive grants (Red Seal trades) and loans.

Your Apprenticeship Training Standard Logbook details completion requirements. Submit the following:

- completed Apprenticeship Training Standard Logbook with signatures
- proof of hours

Phase 3: Certification



To prepare for the CofQ examination download the Provincial and/or Red Seal Exam preparation guides.

Call to make a payment (647-847-3000 or 1-855-299-0028)

To schedule your examination, contact your local Service Delivery Office.

Apprentices eligible to apply for Apprenticeship Completion Grant (Red Seal trades) or Apprentice Completion Bonus (non-Red Seal)

Upon completion, Sponsors may be eligible for Apprenticeship grants, incentives, bonuses or tax credits

* For a list of trades subject to a certification examination, visit: skilledtradesontario.ca

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Any updates to this publication are available on-line; to download this document in PDF format, please follow the link: SkilledTradesOntario.ca.

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Revised 2022 (V300)

Foreword: Purpose, Terms and Conditions of the registered Training Agreement

Purpose:

- Prior to starting official apprenticeship activities, the apprentice, sponsor and a witness are required to sign a Training Agreement.
- The Training Agreement that you have signed is an important legal document that outlines your responsibilities as an apprentice and the responsibilities of your sponsor. Once registered, this training agreement (or contract) marks the start of your formal agreement between the apprentice, the sponsor and the Ministry.
- For compulsory trades, the apprenticeship registration document must be accessible when working.

The Apprentice agrees:

- **To inform the local Service Delivery Office of any change to your contact information or change in sponsor within 7 days;**
- To follow the Sponsor's and Trainer's lawful instructions and make every effort to acquire the skills identified in the Logbook for the Trade which is part of the apprenticeship program established by the Skilled Trades Ontario for the trade;
- To obtain written verification from the Sponsor and the Trainer(s) that the requirements in the Logbook for the trade have been met.
- When you receive an "Offer of Classroom Training", confirm your attendance by following the instructions in the offer. Failure to do so may result in losing your opportunity to attend school which delays the completion of your apprenticeship.

The Sponsor agrees:

- To ensure that the Apprentice is provided with the training required as part of the apprenticeship program established by Skilled Trades Ontario for this trade;
- To review the progress of training with the Apprentice, and with the Trainer(s) where the Sponsor and the Trainer are not the same party.
- Release your apprentice from work to attend in-school training without penalty to the apprentice.
- To maintain the journeyperson/apprentice ratio for your trade, if applicable.
- To monitor their apprentice(s) progress to ensure that the Trainer(s) verifies, in writing, when each skill identified in the Logbook for the trade has been successfully completed by the Apprentice;
- To contact the ministry should any changes in your capacity to train, your contact information, or your apprentice's status in the program change.

Resource	Link
Red Seal Program	red-seal.ca
Apprenticeship in Ontario	ontario.ca/page/apprenticeship-ontario
Employment Ontario	employmentontario.ca
Service Canada	servicecanada.gc.ca
<i>Building Opportunities in the Skilled Trades Act, 2021</i>	Building Opportunities in the Skilled Trades Act, 2021, S.O. 2021, c. 28 - Bill 288 (ontario.ca)
Ministry of Labour, Immigration, Training and Skills Development	Ministry of Labour, Immigration, Training and Skills Development Ontario.ca
Exam Preparation Guide	Exam Resources – Skilled Trades Ontario
<u>Skills Zone (Ontario Skills Passport)</u>	http://www.skillszone.ca/
Ontario Construction Secretariat	http://iconstruction.com
Infrastructure Health and Safety Association	http://www.ihsa.ca
Ministry of the Environment, Conservation and Parks	https://www.ontario.ca/page/ministry-environment-conservation-parks
WSIB	http://www.wsib.on.ca
Technical Standards and Safety Authority	https://www.tssa.org
Workplace Safety North	https://www.workplacesafetynorth.ca/
Ontario One Call (“Call before you dig”)	https://www.ontarioonecall.ca/

**Please note, all website addresses are current at time of printing*

Methodology- Standard Development

A standard is developed with a broad group of trade representatives who form the initial working group. This includes subject matter experts/ tradespeople/ instructors and employers from a cross section of the sector/industry, with varying years of work experience in the field. The working group reviews, develops and recommends revision to the content of the standard. Their role also involves harmonizing and updating other supporting content for the product.

An essential part of the standard development is the validation process. This is the opportunity to have a broader representation of the sector provide feedback on the content of draft standard. This process is conducted in various ways and may include sending out a survey or the draft document (or both) directly to the sector. The comments received are reviewed by the working group and revisions are made as required based on a consensus model.

Introduction to the Logbook

This “on-the job” Logbook is the training standard Heavy Equipment Operator – Excavator (636B) was developed in conjunction with the logbooks for the two other heavy equipment operator trades (636A and 636C) and was developed by Skilled Trades Ontario in consultation with representatives from industry. It identifies all the skills associated with and required to learn the trade.

The Logbook is divided into skill sets, which are further divided into skills. These skill sets and skills are written in statements that describe what the Apprentice must perform and to what standard, in order to be considered competent in that skill.

The successful performance of these skills is tracked in the Logbook. Once achieved, this skills’ sign-off, along with the completion of in-school program requirements or equivalent, is how the apprenticeship program is completed and apprentices receive a Certificate of Apprenticeship.

The Sponsor/trainer and Apprentice are required to sign-off and date each skill after the Apprentice has demonstrated proficiency in these skills. However, if a skill is shaded, it is optional and does not need to be signed-off, though it has been defined a part of the scope of practice for the trade.

All practices described in this standard must be performed by the apprentice according to the specific criteria identified. In general, the standard of performance for the trade of Heavy Equipment Operator – Excavator (636B) are to be performed according to all applicable jurisdictional codes and standards and all health and safety standards must be respected and observed. These include the following:

Standard of Performance

All skills within the Heavy Equipment Operator – Excavator (636B) Apprenticeship Training Standard are to be performed, as applicable, according to and in compliance with the following:

- Occupational Health and Safety Legislation and Regulations;
- Other applicable legislation, regulation, codes and standards;
- Industry best practices;
- Company policies and procedures.

The information presented in this standard is, to the best of our knowledge, current at time of printing and is intended for general application. Please refer to the Skilled Trades Ontario website for the most accurate and up-to-date information: skilledtradesontario.ca

Roles and Responsibilities

Under the [Building Opportunities in the Skilled Trades Act, 2021 \(BOSTA\)](#)

Skilled Trades Ontario (STO) is responsible for:

- Establishing and maintaining qualifications;
- Establishing Apprenticeship Programs and other training programs including training Standards, curriculum standards and certifying examinations;
- Issuing certificates for the purposes of this Act such as Certificates of Qualification;
- Maintaining a Public Registry for compulsory trades skilledtradesontario.ca/public-register/;
- Determining whether the experience and qualifications obtained by applicants for a certificate of qualification who do not complete an apprenticeship are equivalent to those received through completing an apprenticeship (Trade Equivalency Assessments)
- Promoting the skilled trades and conducting research.
- Conducting research and evaluate whether a trade should be prescribed as a trade for the purposes of this Act and to make recommendations on these matters to the Minister.

Ministry of Labour, Immigration, Training and Skills Development (MLITSD) is responsible for:

- Classifying trades as compulsory trades;
- Prescribing scopes of practice for trades;
- Approving which persons may provide in-class training for apprenticeship programs (TDAs);
- Registering Training Agreements;
- Providing those who successfully complete an apprenticeship program with a certificate of apprenticeship (CofA);
- Administering examinations, including certifying examinations;
- Promoting the skilled trades and conducting research.
- Exercising such other powers and perform such other duties and functions as are provided for in this Act or the regulations.

For any matter related to your registered Training Agreement or completing your apprenticeship, you must contact your local Service Delivery Office.

Roles and Responsibilities of the Apprentice

An Apprentice is an individual who has entered into a registered Training Agreement (refer to Forward: *“Purpose, Terms and Conditions of TA” page 1*) with a Sponsor to receive training in a trade as part of an apprenticeship program established by Skilled Trades Ontario. As an Apprentice, you have certain roles and responsibilities to follow throughout your apprenticeship training:

1. As an Apprentice, you signed the Training Agreement and have entered into a contract with the Ministry of Labour, Immigration, Training and Skills Development and your Sponsor.
2. If you are registered as an Apprentice in a compulsory trade, your name will automatically appear in the Skilled Trades Ontario Public Register.
3. You are responsible for informing the staff at your local Service Delivery Office regarding changes to the following:
 - Your Sponsor’s address;
 - Your name and address; and/or,
 - Your Sponsor, including starting employment with a new Sponsor
4. As an Apprentice, you are responsible for completing skills or skill sets in this Logbook (as detailed in the *“Eligibility for Apprenticeship Program Completion”* section of this document) and ensuring that they are dated and signed by both you and your Trainer.
5. Once you have demonstrated competency in all the mandatory skills and received a sign off on each skill by your sponsor/trainer, you must have the Skill Set Completion Form completed and signed by your current Sponsor.
6. Submit your Logbook to your local Service Delivery Office.
7. Present your Apprentice Completion Form (Please refer to Appendix B), along with your authorized Logbook to your local Service Delivery Office.

Roles and Responsibilities of Sponsors and Trainers

Sponsors are responsible for ensuring all terms are met as per the registered Training Agreement. They are named on the registered Training Agreement as the entity responsible for ensuring Apprentices receive the training required as part of an apprenticeship program. As a signatory to this agreement, they are designated as the 'Signing Authority' for the Apprentice's Skill Set Completion Form and are required to attest to successful achievement by signing the appropriate box at the completion of each skill set. Some sponsors may also act as the Trainer.

A **Trainer** is an individual who oversees the performance of a task and sets the workplace expectations and practices for the Apprentice.

In compulsory trades, a Trainer must hold a valid Certificate of Qualification and be registered with Skilled Trades Ontario.

In non-compulsory trades, a Trainer is an individual who holds one of the following:

- A Certificate of Qualification;
- A Certificate of Apprenticeship in the trade; or,
- Has completed both the workplace-based training (competencies and/or hours as applicable) and classroom training components of the trade's apprenticeship program; or,
- Has workplace experience equivalent to the apprenticeship program) and has the skills outlined in the Logbook.

Competency means being able to perform to the required standard (please refer to *"Introduction to the Logbook"*). Trainers/Sponsors and Apprentices are required to sign-off and date the skills in the Logbook following each successful acquisition. The Logbook forms a record of this achievement.

The Trainer must provide their signature based on their assessment and professional judgment that the apprentice is competent in the skills described above. The Trainer's signature is not a general warranty or guarantee of the apprentice's future conduct.

Sponsors participating in this training program will be designated as the Signing Authority and are required to attest to successful achievement by signing the appropriate box included at the end of each skill set.

Health and Safety

Safe working procedures and conditions, accident prevention and the preservation of health are of primary importance for apprenticeship programs in Ontario. These responsibilities are shared and require the joint efforts of government, sponsors, employers, supervisors, workers, apprentices and the public to achieve the goal of making Ontario's workplaces safe and healthy.

The [Occupational Health and Safety Act](#) (OHSA) provides us with the legal framework and the tools to do this. It sets out the rights and duties of all parties in the workplace, placing ultimate responsibility on the employer for the health and safety of workers (in this case, apprentices) by ensuring procedures, controls, and training are established for dealing with workplace hazards. Therefore, it is imperative that all parties become aware of circumstances that may lead to injury, illness or harm. Safe learning experiences and environments can be created by controlling the variables and behaviours that may contribute to or cause an accident injury or illness.

A sponsor who is not the employer is reminded that the employer has legal responsibilities respecting health and safety over the apprentice who is their worker. The sponsor should encourage safe work habits and adherence to the employer's occupational health and safety requirements for the workplace.

It is generally recognized that a positive attitude about safety in partnership with health and safety competency contributes to an accident-free environment. Everyone will benefit as a result of a healthy attitude towards the prevention of accidents.

Workers and apprentices can be exposed to a multitude of hazards and, therefore, should be familiar with the Occupational Health and Safety Act and regulations.

The Internal Responsibility System:

One of the primary purposes of the Occupational Health and Safety Act (OHSA) is to facilitate a strong Internal Responsibility System (IRS) in the workplace. To this end, the OHSA lays out the duties of employers, supervisors, workers, apprentices, constructors and workplace owners.

Workplace parties' compliance with their respective statutory duties is essential to the establishment of a strong IRS in the workplace.

Simply put, the IRS means that everyone in the workplace has a role to play in keeping workplaces safe and healthy. Workers and apprentices in the workplace who see a health and safety problem such as a hazard or contravention of the OHSA in the workplace have a statutory duty to report the situation to the employer or a supervisor. Employers and supervisors are, in turn, required to address those situations and acquaint workers with any hazard in the work that they do.

The IRS helps support a safe and healthy workplace. In addition to the workplace parties' compliance with their legal duties, the IRS is further supported by well-defined health and safety policies and programs, including the design, control, monitoring and supervision of the work being performed.

Roles and Responsibilities under the Occupational Health and Safety Act

Employer's Responsibilities include but are not limited to the following:

- Instruct, inform and supervise workers and apprentices to protect their health and safety
- Appoint competent persons as supervisors.
- Inform a worker, apprentice, or a person in authority, about any hazard in the work and train them in the handling, storage, use, disposal and transport of any equipment, substances, tools, material, etc.
- Take every precaution reasonable in the circumstances for the protection of a worker/apprentice.
- In workplaces in which more than five workers are regularly employed, prepare and post a written occupational health and safety policy and set up and maintain a program to implement it.
- Prepare and post policies with respect to workplace violence and workplace harassment and develop programs supporting workplace harassment and workplace violence policies.
- Ensure knowledge of applicable legislative, regulatory, codes and standards so requirements to be followed are clear to all workers/apprentices.

Trainer/Supervisor Responsibilities include but are not limited to the following:

- Ensure that a worker or apprentice works in compliance with the Act and regulations.
- Ensure that any equipment, protective device or clothing required by the employer is used or worn by the worker or apprentice.
- Advise a worker/apprentice of any potential or actual health or safety dangers known by the supervisor.
- Take every precaution reasonable in the circumstances for the protection of workers.

Worker/Apprentice Responsibilities include but are not limited to the following:

- Work in compliance with the Act and regulations.
- Use or wear any equipment, protective devices or clothing required by the employer.
- Report to the employer or supervisor any known missing or defective equipment or protective device that may endanger the worker or another worker.
- Report any hazard or contravention of the Act or regulations to the employer or supervisor.
- Not remove or make ineffective any protective device required by the employer or by the regulations.
- Not use or operate any equipment or work in a way that may endanger any worker.

The Three Rights of Workers/Apprentices

The OHSA gives workers and apprentices three important rights:

1. The right to know about hazards in their work and get information, supervision and instruction to protect their health and safety on the job.
2. The right to participate in identifying and solving workplace health and safety problems either through a health and safety representative or a worker member of a joint health and safety committee.
3. The right to refuse work that they believe is dangerous to their health and safety or that of any other worker in the workplace.

For construction projects applying to construction trades a Constructor is also identified:

On all projects, either the owner or someone hired by the owner is the constructor.

The intent of the Occupational Health and Safety Act is to have one person with overall authority for health and safety matters on a project. This person is the constructor of the project.

The constructor is the party with the greatest degree of control over health and safety at the entire project and is ultimately responsible for the health and safety of all workers and apprentices. The constructor must ensure that all the employers, apprentices and workers on the project comply with the Act and its regulations.

Constructor's duties include the following:

- To ensure that the measures and procedures in the Act and regulations are carried out.
- To ensure that every employer, apprentice and worker on the project complies with the Act and regulations.
- To ensure that the health and safety of workers/apprentices on the project are protected.

Ministry of Labour, Immigration, Training and Skills Development

The Ministry of Labour, Immigration, Training and Skills Development conducts periodic inspections of workplaces to ensure that safety acts and regulations are being followed. Please direct any questions to the Occupational Health and Safety Contact Centre at 1-877-202-0008.

Important Safety Reminders for Heavy Equipment Operators:

Underground and Overhead Utility work:

Heavy Equipment Operators may work around underground and overhead utilities. As a result, it is critical, for the safety of the operator, co-workers and the public, that Heavy Equipment Operators follow legislative and regulatory requirements. The Electrical Safety Authority and the Technical Standards and Safety Authority have established 2 important guidelines:

- a. Guideline for excavation in the vicinity of utility lines
- b. Guideline for the proximity to distribution lines

Trenching work:

Heavy Equipment Operators are frequently engaged in trenching and deep excavation work. As a result, it is important for Heavy Equipment Operators to adhere to the applicable legislation, regulation and standard when it comes to trenching safety. Part III of O. Reg 213/91 establishes the minimum requirements regarding excavations.

Reversing Equipment:

When operating heavy equipment, Heavy Equipment Operators may encounter blinds spots, depending on the equipment being operated. Blinds spots are a leading cause of struck-by injuries and fatalities on construction sites. Accident prevention strategies require 4 key elements; site planning, signalers, training and electronic devices.

Apprenticeship Program Summary/Guidelines

Scope of Practice

The Scope of Practice for the trade of **Heavy Equipment Operator – Excavator** is set out in section 63 of Ontario Regulation 875/21 under BOSTA and reads as follows:

Heavy equipment operator — excavator

63. *The scope of practice for the trade of heavy equipment operator — excavator includes inspecting, maintaining, transporting and operating full (standard) size excavator equipment by performing the following:*
1. *Operating equipment in a safe and efficient manner.*
 2. *Performing pre-operational inspections.*
 3. *Performing preventative maintenance.*
 4. *Transporting equipment.*
 5. *Reading and interpreting site plans and manufacturer’s manuals.*
 6. *Installing attachments.*
 7. *Loading and unloading equipment.*
 8. *Excavating, trenching, grading, loading, ramp building, stockpiling, backfilling and hoisting material. O. Reg. 875/21, s. 63.*

While the Logbook draws on the scope of practice regulation (Section 63 of Ontario Regulation 875/21 under BOSTA). The Logbook does not purport to add to or modify the scope of practice as provided in regulation.

Program Guidelines

On-the-Job Training Duration

Industry has identified a benchmark of 2260 hours as the duration necessary for any Apprentice to become competent in the skills required. There may be circumstances in which the duration varies from this guideline.

In-Class Training Duration

Industry has identified 300 hours of in-school training as the duration necessary for an Apprentice to complete the in-school curriculum for this program. Of the 300 hours in-class training hours, 129 hours are considered common core between all three HEO trades and 171 hours are specific to HEO—Excavator.

All reportable subjects need to be completed for in-class requirements to be met.

Total Training Hours

2560 hours

Journeyperson to Apprentice Ratio

While some of the trades regulated under BOSTA are subject to Journeyperson to Apprentice ratios set out in regulation, this trade is not one of them. Instead, **industry has recommended a Journeyperson to Apprentice ratio guideline of 1 Journeyperson (or individual who is deemed equivalent to a journeyperson) to 1 Apprentice** as the ratio necessary for an Apprentice to be properly trained on the job in this program.

Ratios in Regulation:

If a trade has been prescribed as being subject to an apprentice to journeyperson ratio, the number of apprentices who may be sponsored or employed by a person in the trade in relation to the number of journeypersons employed or otherwise engaged by the person in the trade **shall not exceed one apprentice for each journeyperson**; Further information can be found in the Apprenticeship section of the Government of Ontario website at ontario.ca/page/hire-apprentice

Program Requirements

Wage Rates

There are no wage rates in regulation for this trade.

Compulsory and Non-compulsory Classification

Regulations *Building Opportunities in the Skilled Trades Act, 2021* and the classification of each trade as either “compulsory” or “non-compulsory.” The trade of Heavy Equipment Operator - Excavator is non-compulsory.

Eligibility for Apprenticeship Program Completion

The Apprentice must:

- Achieve competency in all mandatory (unshaded) skills as identified in the Logbook.
- Complete the in-school training as outlined in the Curriculum Standard

It is the responsibility of an Apprentice to maintain a training record in the form of a Logbook. The Sponsor and Trainer are required to sign-off when competencies in the trade are achieved.

Skills for Success Summary

Skills for Success are needed in a quickly changing world for work, learning and life. They are foundational for building other skills and important for effective social interaction. Everyone benefits from having these skills as they help individuals get a job, progress at their current job and change jobs. They also help individuals become active members of their community and succeed in learning.

Through extensive research and consultations, the Government of Canada launched the new Skills for Success model renewing the previous Essential Skills framework to better reflect the needs of the current and future labour market.

The occupational specific Essential Skills profiles are available online. These will be updated over time to align with the new Skills for Success model found here: [Skills for Success model](#).

Standard of Performance

In general, the standard of performance for the trade of Heavy Equipment Operator - Excavator are to be performed, as applicable, according to and in compliance with the following:

Industry Safety Standards which are based upon:

- Occupational Health and Safety Legislation and Regulations;
- Jurisdictional legislation and regulations, codes and standards (municipal bylaws etc.)
- Company policies and procedures
- All applicable manufacturers specifications and engineering specifications

Other Suggested or Required Certification(s) and Training

While an apprentice receives health, safety and occupational specific training and/or certification in a variety of fields during their apprenticeship, it is important to be aware that other occupational health and safety training and certification renewal or updating may also be required during their career before performing new types of work.

Heavy Equipment Operators work in multiple industries and sectors. As a result, there may be other employer specific or industry/sector training and certifications that may be required or recommended. These may include:

- Mobile Crane Operator 0 to 8 ton (construction)
- Working at Heights
- Traffic Control Safety training
- Ground disturbance training (utility sector)
- Pipeline safety training
- WHMIS
- First Aid and CPR (AED training)
- Confined Space Awareness training
- Propane in Construction training

Heavy Equipment Operators may also work in specialized sectors. Therefore, it is important for apprentices to partake in any industry or sector specific training or certification that may be required. For example:

- Surface Miner
- Forestry pit and road construction equipment operator

Training the Apprentice - Tips for Apprentices, Sponsors and Trainers

Tips for Apprentices

Remember, it takes time to learn. The following is a list of additional tips and tools to help make the most of your apprenticeship training:

- Practice safe work procedures early to create good habits;
- Use your Logbook as a journal to keep track of the skills you have achieved;
- Review your training plan with your Training Consultant, Trainer, or Sponsor;
- Discuss your training needs with your Trainer and/or Sponsor;
- Listen to the suggestions of your Trainer;
- Ask your Trainer questions if you are unsure of any skill you need to perform or any tools or equipment you need to use to perform your duties;
- Show enthusiasm and develop good work habits; and,
- Upon demonstration of competency, ensure that you and your Trainer sign-off the individual skills.

To get the most from this mentoring experience, request exposure to the full scope of the trade; meet regularly with your Sponsor/Trainer to discuss your progress, ask questions and seek feedback.

Tips for Sponsors

- Select Trainers with good communication skills and who work well with others;
- Ensure that the Apprentice always works under the direction of or has access to a qualified Trainer;
- Encourage Trainers to take upgrading courses (e.g. Train the Trainer, Mentor, Coach, etc.);
- Set out clear expectations and involve both the Apprentice and Trainer in developing the training plan
- Encourage safe work habits;
- Allow time for the Trainer to train and demonstrate skills to the Apprentice;
- Provide opportunities and time for the Apprentice to learn the trade;
- Ensure that the Apprentice receives the varied on-the-job trade training experience outlined in this document;
- Recognize good performance;
- Observe frequently;
- Provide constructive feedback and conduct regular performance reviews involving the Apprentice and Trainer;
- Use the Logbook as a monitoring tool and a part of regular performance evaluations; and,
- Complete the Skill Set Completion Form once the Apprentice has demonstrated competency in the skills.
- The detailed content listed for each skill is not intended to represent an inclusive list; rather, it is included to illustrate the intended direction for the skill acquisition.

Tips for Trainers

Trainers are responsible for ensuring the Apprentice is developing the skills outlined in this document. Here is a list of tips and tools to help Trainers in their supervision of Apprentices:

- Demonstrate model safe work habits;
- Provide opportunities and time for the Apprentice to learn the trade;
- Treat Apprentices fairly and with respect;
- Review the Logbook with the Apprentice and develop a training plan;
- Set out clear expectations and recognize good performance;
- Expose Apprentices to the full scope of the trade by providing training on the skills outlined in this document;
- Encourage and respond to all questions;
- Be patient;
- Explain, show and demonstrate the skill;
- **Meet regularly with the Apprentice to discuss the apprentice's progress**
- Provide continuous feedback;
- Sign-off skills when your Apprentice demonstrates competency, and,
- Use the Logbook as a guide to evaluate competence in each skill area. By using the Logbook, Trainers will be able to guide the process to and assist Apprentices to develop skills outlined in this document.

The best mentoring experience is when an Apprentice is given as much training/exposure to the full scope of the trade as possible. If this is not possible, help them to determine other ways this may be possible.

Notice of Collection of Personal Information

1. At any time during your apprenticeship training, you may be required to show this Logbook to the local Service Delivery Office. You will be required to submit the signed Apprenticeship Completion form to the Service Delivery Office in order to complete your program. The Service Delivery Office will use your personal information to administer and finance Ontario's apprenticeship training system, including confirming your completion and issuing your Certificate of Apprenticeship.
2. The Service Delivery Office will disclose information about your program completion and your Certificate of Apprenticeship to the Skilled Trades Ontario, as it is necessary for the Skilled Trades Ontario to carry out its responsibilities.
3. Your personal information is collected, used and disclosed by the Ministry of Labour, Immigration, Training and Skills Development under the authority of the *Building Opportunities in the Skilled Trades Act, 2021 (BOSTA)*.
4. Questions about the collection, use and disclosure of your personal information by the Ministry may be addressed to the:

Manager, Employment Ontario Contact Centre
Ministry of Labour, Immigration, Training and Skills Development
33 Bloor St. E, 2nd floor, Toronto, Ontario M7A 2S3
Toll-free: 1-800-387-5656; Toronto: 416-326-5656
TTY: 1-866-533-6339 or 416-325-4084

List of Trainers

Trainer's Name (Please Print)	Trainer Signature	Date of start with Trainer (day/month/year)

9342 **Protect Self and Others (Pre and Post Operational Safety)**

Heavy equipment, including excavators, used in construction, mining, forestry and other industries are extremely powerful both in size and capacity. In addition, safety concerns such as soil stability, overhead and underground obstacles, powerlines and other hazards make the work of heavy equipment operators inherently dangerous.

Heavy Equipment Operators will confront daily risks when performing their jobs. Though risks may vary depending on the setting and circumstances, incidents can be prevented by always taking safety precautions into account, by implementing safety protocols, procedures and requirements and following them prior to and after the use of heavy equipment.

Skills

9342.01 **Conduct job safety analysis (JSA)** to identify potential hazards and determine the safest way to perform the job by:

- reviewing site plan and/or demolition plan;
- reviewing the traffic management plan with the health and safety representative and foreman prior to job start;
- conducting an initial visual inspection of the work area;
- interpreting emergency response plan;
- assessing worksite conditions such as height clearances, base conditions, presence of hazards;
- assessing ground and environmental conditions such as identifying soil types (I, II, III, IV) and reviewing rapidly changing weather to determine adverse effects on work location;
- conducting inspections on a continual basis to identify potential hazards such as material placement, ground conditions, overhead hazards, proximity to obstructions, pedestrian and vehicle traffic and manholes;
- providing input into the location of garbage receptacles, fuel storage and temporary buildings;
- removing visual barriers and obstructions to maintain eye contact with others and intended path of travel is clear;
- confirming locate sheet is provided and current;
- identifying the location of utilities; and,
- identifying and marking the location of potential hazards such as manholes and water valves using tools such as cones, ribbons and stakes

according to work environment and work conditions, government legislation and regulations and site and company policies.

Heavy Equipment Operator - Excavator

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor**

9342.02 Use personal protective equipment (PPE) such as hard hat, safety boots, eye protection, reflective clothing and hearing protection to support the safety of self and others and extend the life of the equipment by:

- selecting equipment applicable to the job;
- inspecting the equipment for breaks, signs of wear, tears, cracks, leakage, loose and defective components;
- adjusting equipment for fit;
- reporting and tagging deficiencies; and,
- removing from service if necessary

according to work environment and work conditions, government legislation and regulations, manufacturer's specifications, site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9342.03 Maintain personal protective equipment (PPE) such as hard hat, safety boots, eye protection, reflective clothing and hearing protection to support the safety of self and others, prevent damage and extend the life of the equipment by:

- inspecting the equipment for breaks, signs of wear, tears, cracks, leakage, loose and defective components;
- analyzing equipment performance and function;
- placing and storing the equipment in a designated location;
- reporting and tagging deficiencies; and,
- removing from service if necessary

according to work environment and work conditions, government legislation and regulations, manufacturer's specifications, site and company policies.

Heavy Equipment Operator - Excavator

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9342.04 Use operator's manual by:

- placing manual in a location that is accessible to the operator;
- confirming the manual information is up to date; and,
- navigating the information in the manual

according to work environment and work conditions, government legislation and regulations, manufacturer's specifications, site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9342.05 Use safety equipment such as fire extinguishers, fire suppression systems, seatbelts, warning devices, back up alarms, labels, ROPS, FOPS, lock-out devices, first aid kits by:

- selecting equipment relevant to the task;
- inspecting and testing the equipment to confirm functionality;
- securing equipment and ensuring fit where applicable;
- adjusting the equipment as required;
- confirming required labels are in place and legible;
- making the equipment readily available for use;
- noting/tagging deficiencies;
- notifying supervisor of any deficiencies; and,
- removing from service if necessary

according to work environment and work conditions, manufacturer's specifications (operator's manual), government legislation and regulations and site and company policies.

Heavy Equipment Operator - Excavator

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9342.06 Communicate with others by:

- participating in worksite orientation meetings;
- demonstrating verbal and written skills;
- communicating and cooperating with supervisors and co-workers;
- acting as a team player;
- mentoring and providing instruction to others as necessary;
- using pre-determined language and signals;
- using communication equipment such as radios, cell or satellite phones, horns and other devices for signalling;
- recognizing established signs/signals/alarms;
- communicating with the signal person;
- responding to alarms such as warning signs, danger notices, bells, whistles;
- providing instruction to others to indicate positions of equipment as well as the direction and swing radius; and,
- signalling haul unit drivers that truck is loaded and ready where applicable

according to work environment and work conditions, manufacturer's specifications (operator's manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9342.07 Manage health and wellness by:

- practising techniques for remaining physically, mentally and emotionally “fit for work”;
- maintaining a healthy lifestyle and diet to positively influence fatigue, performance, physical fitness and agility;
- balancing personal and work life, to contribute to overall occupational success;
- dealing with work-related and personal stress that can affect family relationships;
- maintaining an emotional state that will positively affect tolerance for dealing with stress, the decisions they make, and their ability to do a job;
- assessing emotional state before deciding to operate equipment;
- recognizing that the effects of alcohol, over-the-counter drugs, prescription drugs or illegal drugs can continue before, during and after work, and there can also be consequences for using these substances;
- using personal strategies to recognize and alleviate the causes and symptoms of stress that may affect performance at work;
- using personal strategies to recognize and combat fatigue;
- planning ahead for work breaks to be taken;
- using procedures and proactive techniques such as stretching and lifting methods to prevent workplace injuries;
- planning suitable sleep and other breaks to avoid fatigue while completing operating responsibilities;
- addressing occupational factors which contribute to health-related challenges such as obstructive sleep apnea, back strain, injuries caused by slips, trips and falls, hypothermia and hyperthermia;
- using personal hygiene habits that positively affect workplace relationships.
- confirming access to water, food and medication when applicable; and,
- accessing assistance as required

according to work environment and work conditions, manufacturer’s specifications, government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9343 Protect Self, Others and the Environment (Operational Safety)

Heavy equipment used in construction, mining, forestry and other industries are extremely powerful both in size and capacity. In addition, safety concerns such as soil stability, overhead and underground obstacles, powerlines and other hazards make the work of heavy equipment operators inherently dangerous.

Heavy Equipment Operators will confront daily risks when performing their jobs. Though risks may vary depending on the setting and circumstances, incidents can be prevented by always taking safety precautions into account, by implementing safety protocols, procedures and requirements and following them prior to and after the use of heavy equipment. In addition, environmental regulations and requirements have added to the responsibilities of the operator when performing specific tasks.

Skills

9343.01 Mount and dismount excavator by:

- maintaining three points of contact at all times;
- keeping hand and foot holds, handrails and walkways free of debris (e.g. ice, mud);
- avoiding lateral movements; and
- avoiding hazardous ground conditions when parking or positioning the equipment

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice’s Sponsor**

9343.02 Perform spill control procedures by:

- confirming procedures are posted;
- prioritizing spill control measures for factors such as health and environment;
- using spill kits to contain hazardous materials such as oil, fuel and antifreeze;
- controlling ignition sources where applicable;
- preventing contamination of manholes or waterways and other potentially affected areas using methods such as digging a trench or dyke, diverting and blocking;
- using alternate methods or materials to contain spills, such as sawdust, sand, straw and plastic;
- cleaning up according to the site-specific spill control plan/procedures;
- removing and disposing of contaminated material; and,
- notifying supervisor and authorities having jurisdiction as required

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), environmental regulations and legislation, other government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9343.03 Perform erosion and sediment control procedures by:

- assisting in installing sediment control materials such as silt fences and blankets to protect surrounding vegetation and waterways;
- minimizing exposed soils;
- minimizing sediment losses;
- minimizing erosion potential;
- following environmental timing restrictions to minimize impact on fish and wildlife;
- avoiding over-trafficking sensitive areas or areas with increased disturbance;
- placing stockpiles away from watercourses and environmentally sensitive areas when possible;
- sealing up spoil piles to prevent erosion and minimize water penetration;
- controlling water run-off;
- eliminating areas of standing water by grading;

- planning work to minimize damage to the environment caused by sedimentation;
- performing operations away from riparian zones to avoid environmental damage; and,
- consulting with supervisors or authority having jurisdiction to determine riparian regulations for the jobsite

according to work environment and work conditions, manufacturer’s specifications, environmental regulations and legislation, other government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9343.04 Handle materials by:

- using, storing and disposing of materials such as used oil, antifreeze, fuel and other materials that may influence environmental factors such as vegetation, insects, emissions, noise, animals and sun;
- placing or stockpiling construction materials; and,
- loading and unloading material

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), environmental regulations and legislation, other government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9343.05 Minimize the environmental footprint by:

- using tier 4 equipment to reduce emissions;
- reducing idling times to reduce emissions and noise pollution;
- implementing idle free zones if possible;
- operating efficiently by reducing cycles;
- operating equipment within manufacturer’s specifications;
- following the required maintenance schedule;
- following erosion and sediment control procedures (e.g. checking straw bales and silt fences daily)
- reporting any damage with environmental implications as required (e.g. reporting erosion control deficiencies);
- following spill control procedures;
- following environmental guidelines e.g. species at risk guidelines, cross contamination;
- remaining in work area/right of way;
- reviewing cleaning practices to minimize use of toxic chemicals; and,
- encouraging and collaborating with co-workers to do positive things for the environment and be more sustainable in their own lives (part of tailgate meetings)

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), environmental regulations and legislation, other government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9344 Organize Work

Heavy Equipment Operators use and apply documentation and information in different ways to safely and successfully perform and complete their jobs. This includes; time sheets, inspection checklists, health and safety forms and logbooks. Heavy Equipment Operators must also interpret data and information including survey indicators and markings, utility markings and locates. As a result, Heavy Equipment Operators require an understanding of metric and imperial measurement systems, basic abbreviations and symbols for survey markings, reading construction drawings/blueprints and expressions of slopes and grades.

Skills

9344.01 Use documentation such as time sheets, inspection checklists, health and safety forms, logbooks, incident reports/forms, operator’s manual, maps, drawings, charts, labels, and locate sheets by:

- reading, interpreting and responding to documents as required;
- documenting and detailing in a clear, legible and concise manner; and,
- completing and submitting documentation as required

according to work environment and work conditions, manufacturer’s specifications, government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice’s Sponsor**

9344.02 Determine methods of approach by:

- using information from drawings and plans to assess method of approach;
- assessing underground and overhead obstacles such as building protrusions, roof overhangs, overhead power lines, snow, bridges and overpasses;
- determining if an alternate approach is plausible or needed;
- assisting with the gathering historical or anecdotal information, as-built records from local authorities for undocumented conditions;
- adapting operation based on site conditions and environmental information such as proximity to waterways, soil conditions and weather conditions;
- adapting operation based on equipment capability, limitations and availability;
- adapting operation based on number and types of equipment onsite;
- assessing site conditions for haulage equipment; and,
- confirming methods meet legislative and regulatory requirements

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9344.03 Interpret survey indicators and data by:

- clarifying abbreviations and symbols by consulting with surveyors or supervisor;
- identifying markings on survey indicators such as survey stakes, benchmarks and hubs;
- setting up survey stakes as offsets for excavation lines and gridlines
- verifying survey data such as grade elevation and location to confirm accuracy of data; and,
- notifying immediate supervisor of inaccuracies or inconsistencies of survey data such as GPS coordinates and elevations

according to work environment and work conditions, manufacturer’s specifications, government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9344.04 Check grade by:

- using grade checking devices such as GPS, laser, digital machine systems, batter boards and string line to check and verify that the required grade is achieved;
- creating reference points on the equipment to assist in obtaining the desired grade; and,
- calibrating devices (directly attached to the equipment such as GPS) as required

according to work environment and work conditions, manufacturer’s specifications, government legislation and regulations and site and company policies

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9345 Perform Pre-Operational Inspection

Heavy Equipment Operators are required to perform pre-operational inspections on their tools, equipment and attachments. Inspections help prevent incidents and injuries. Conducting a pre-operational inspection is a critical process for verifying operation, confirming active workings as well as responding to problems, hazards or unsafe conditions. The inspection allows the operator to be confident in the equipment's ability to perform the designated function or task. Inspections may include visual and operational checks. Heavy Equipment Operators are required to report problems to their direct supervisor.

Skills

9345.01 Inspect excavator and attachments by:

- visually (walk around/circle check) and operationally inspecting the following systems and components where applicable:
 - cooling system and components,
 - engine lubrication system and components
 - electrical system and components
 - air intake system components such as air filters, dust bowls and air restriction indicators
 - drive train and components
 - undercarriage components
 - hydraulic system and components
 - suspension system and components
 - cab and components
 - load bearing structure and components (frame)
 - ROPS and FOPS
 - tires and rims
 - attachment systems (mechanical or hydraulic)
- checking for cracks, leaks, corrosion, misalignment, malfunctions, loose, missing, or defective components;
- checking to verify controls such as transmission and hydraulic lock outs are in locked or neutral position;
- turning on the unit and inspecting gauges for operation;
- checking fuel level / DEF fluid (for tier 4 machines only);
- continuing start up procedures;
- monitoring gauges;
- cycling controls for operation;
- conducting warm-up procedures and rechecking; and,
- inspecting safety equipment by testing horn, travel alarm, lights, rear view camera operation, first aid kits, emergency shut down, fire suppression systems

according to work environment and work conditions, manufacturer's specifications (operator's manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor**

9345.02 Complete pre-operational inspection sheet by:

- filling out daily equipment log;
- recording data accurately;
- documenting functions and defects in a clear, concise and legible manner; and,
- preparing report for review and signature by supervisor

according to work environment and work conditions, manufacturer's specifications (operator's manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9346 Perform Scheduled and Preventative Maintenance

The responsibilities of Heavy Equipment Operators typically include the performance of scheduled and preventative maintenance. Wear and tear on the equipment can lead to reduced machine efficiency. Routine maintenance helps to make sure the equipment is running as required and may also, pro-actively, reduce equipment downtime, limit expensive repair costs as well as conserve the life span of the equipment. The Heavy Equipment Operator has the responsibility to take ownership of any piece of equipment they are operating. When equipment does not work, work may be interrupted. Equipment maintenance is indicative of a valuable employee. It is important, for safety purposes, that operators verify that the equipment cannot be started prior to performing maintenance.

Skills

9346.01 Maintain excavator operator station area by:

- cleaning windows, floors, controls, filters, and gauges;
- checking and lubricating seat mechanism;
- replacing windshield wipers and light bulbs;
- topping up fluids; and,
- adjusting mirrors

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice’s Sponsor**

9346.02 Perform basic maintenance on excavator systems and components by:

- topping up fluids as needed;
- inspecting tire and checking tire pressure (rubber tire excavator);
- lubricating all fittings; and,
- changing and cleaning filters

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9346.03 Lubricate excavator, components and attachments by:

- selecting lubricant;
- identifying lubrication points;
- installing lubricant and replacing defective grease fittings;
- changing oil and filters; and,
- using grease guns and lube charts

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9346.04 Maintain undercarriage and drive train systems (tracked excavator) by:

- cleaning tracks, rollers, and final drive seals of dirt and debris;
- removing material from tracks and tires, bearings, sprockets rollers and wheels;
- tightening or adjusting tracks and loose fasteners;
- adjusting track tension;
- tightening undercarriage component mounting bolts; and,
- greasing drive train components

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9346.05 Maintain drive train systems, tires and rims (rubber tire excavator) by:

- removing material from tires, bearings, sprockets rollers and wheels;
- inflating tires to specified pressure;
- adjusting tire pressure; and,
- tightening loose wheel nuts

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9346.06 Perform basic maintenance on excavator attachments by:

- greasing attachments;
- checking mounted systems such as GPS and laser systems;
- adjusting and tightening clamps, electric lines, supports and receivers;
- visually inspecting attachments for unusual wear, damage, cracks, oil leakage and broken welds;
- visually inspecting bolts and pins on attachments and quick attach;
- changing or rotating wear points such as teeth, edges, scarifiers
- replacing or reporting damaged or missing cutting edges, bolts, teeth, and loose pins;
- replacing ground engaging tools, defective hoses and seals; and,
- capping hydraulic lines during storage

according to work environment and work conditions, manufacturer's specifications (operator's manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9347 Inspect and Use Tools, Instruments and Equipment

Heavy Equipment Operators may be required to use various tools, instruments and equipment to perform their jobs. These may include hand and power tools, measuring and testing equipment, hoisting and rigging equipment as well as grade checking and tracking instruments.

Skills

9347.01 Use hand and power tools by:

- selecting tools applicable to the task at hand;
- confirming power level (if applicable) and maintaining the integrity of the power supply;
- cleaning tools to support optimum operation;
- lubricating tools as required;
- using tools for their intended purpose;
- replacing consumables as required; and,
- inspecting tools for defects and take remedial action such as repairing, replacing

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice’s Sponsor**

9347.02 Maintain hand and power tools by:

- cleaning tools to support optimum operation;
- lubricating tools as required;
- storing tools in designated areas such as tool boxes or cabinets;
- replacing consumables as required;
- inspecting tools for defects and take remedial action such as repairing, replacing;
- tagging and disposing of defective tools; and,
- removing from use as required

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9347.03 Use measuring and testing equipment by:

- selecting equipment applicable to the task at hand;
- identifying calibration procedures;
- verifying calibration levels as required;
- verifying functionality of equipment;
- recharging laser levels and batteries at the end of shift or as required;
- confirming power level (if applicable) and maintaining the integrity of the power supply;
- cleaning equipment to support optimum operation;
- inspecting equipment for defects and take remedial action;
- tagging and disposing of defective equipment; and,
- storing equipment in designated areas

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9347.04 **Set up grade checking and tracking instruments** such as electronic equipment and laser levels by:

- selecting instrument applicable to the task at hand;
- selecting the set-up location;
- calibrating;
- establishing location of the benchmark and verifying elevation;
- creating benchmark when applicable; and,
- establishing the height of the instrument (working number)

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9347.05 **Use grade checking and tracking instruments** such as electronic equipment and laser levels by:

- selecting equipment applicable to the task at hand;
- verifying calibration of equipment before use at the beginning of each shift and throughout the shift;
- verifying that project data file being used corresponds to the project;
- troubleshooting instruments for failures;
- monitoring and verifying accuracy of the instruments;
- installing mobile signal receiver onto equipment and removing after use;
- interpreting measurement data on tracking instruments and making necessary adjustments or responses;
- inspecting equipment for defects and taking remedial action;
- identifying defective equipment, discrepancies (e.g. elevation) and reporting to supervisor (issues: incorrect benchmark, incorrect instrument height, environmental conditions, calibration); and,
- storing instruments in designated areas

according to work environment and work conditions, manufacturer's specifications (operator's manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9347.06 Use hoisting and rigging equipment by:

- determining weight of load to be lifted;
- inspecting lifting equipment for deficiencies or damage such as cuts, tears, wear and fraying before each use;
- maintaining equipment as required;
- referring to load chart specifications to determine lifting capacity of the equipment;
- selecting and inspecting rigging materials and configuration suited to the hoisting task;
- checking rigging arrangement to confirm secure lifting;
- using tag lines to guide loads;
- identifying defective equipment and reporting to supervisor; and,
- responding to the directions of the signal person

according to work environment and work conditions, manufacturer's specifications (operator's manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9348 Perform Basic Excavator Functions

Prior to operating the excavator to perform a specified task, it is critical that Heavy Equipment Operators, in any situation, have the capacity to maintain control of the equipment, monitor equipment performance, troubleshoot problems (including replacing wear parts) as well as install and/or remove attachments. These skills allow the operator to complete their job efficiently and effectively.

Skills

9348.01 Test excavator and attachment operation in a controlled setting prior to the work application by:

- traveling in travel (transport) position;
- performing steering, swing, brake operations;
- performing forward and reverse operating cycle; and,
- monitoring work area for obstructions, personnel and equipment traffic

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice’s Sponsor**

9348.02 Maintain control of excavator by:

- entering and exiting machine using three-point contact while facing machine;
- adjusting seat and controls for ease of operation;
- using all applicable safety devices (e.g. seat belts, hydraulic lock-out);
- adjusting throttle and travel speed according to grade and roughness of terrain;
- maintaining centre of gravity while manoeuvring equipment with load;
- manipulating controls for smooth operation of equipment;
- maintaining prescribed clearance between equipment, and obstacles and utilities; and,
- using features such as mirrors and back-up cameras

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9348.03 Monitor performance of excavator by:

- visually scanning gauges for temperature and oil pressure to confirm that they are within safe operating range; and,
- identifying signs of fluid leaks, loss of power, other equipment problems or equipment failure using senses such as sight, smell and feel

according to work environment, work conditions and manufacturer’s specifications (operator’s manual).

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9348.04 Troubleshoot excavator and attachment problems by:

- identifying faulty components and fault codes to explain problem to service personnel or to order parts;
- interpreting fault codes and monitor warning to determine course of action; and,
- reporting extent of problem to supervisor to determine how production, safety and environment will be affected (major vs. minor shut-down)

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9348.05 Install excavator attachments by:

- identifying and selecting attachments for the work to be performed;
- inspecting attachment for faults prior to installation and use;
- selecting tools need to complete the installation or removal;
- following recommended installation and removal procedures;
- lubricating attachment or quick attach as required; and,
- testing equipment and attachment to verify installation

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9348.06 Change or remove excavator attachments by:

- identifying and selecting attachments for the work to be performed;
- inspecting attachment for faults prior to installation and use;
- selecting tools need to complete the installation or removal;
- following recommended installation and removal procedures;
- lubricating attachment or quick attach as required;
- testing equipment and attachment to verify installation; and,
- removing and storing attachment as required

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9348.07 Replace excavator attachment guards and wear components by:

- assessing the current state of the guard or wear component;
- identifying when replacement is required; and,
- replacing as needed

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349 Operate Excavator

The tasks performed by excavator operators are becoming more complicated and multi-faceted. Technological changes allow operators to perform tasks with greater efficiency, accuracy and safety. For the excavator, there is an ever-expanding list of attachments to be used to perform many different tasks and functions. This has enhanced the capacity and role of the excavator operator.

Skills

9349.01 Perform excavator set-up by:

- assessing job site conditions and requirements such as soil conditions, weather hazards;
- communicating with site personnel;
- identifying and locating utilities;
- interpreting grade stake information and job specifications;
- planning the material handling process to complete the job;
- visualizing the end result;
- determining location for set-up taking into consideration factors such as working in conjunction with other equipment, hazards, obstacles and the need for access/egress; and,
- setting-up of machine for task at hand

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice’s Sponsor**

9349.02 Position excavator for task by:

- stabilizing equipment;
- minimizing swinging/movement;
- excavating over top of the idlers;
- confirming the swing radius is within the work zone;
- considering all obstacles;
- considering the position of other vehicles and equipment; and,
- considering location of cars, traffic, public, other workers

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.03 Clear and grub land by:

- selecting the attachment for the task at hand;
- removing stumps and roots; and,
- piling up and sorting debris and logs for optimal production

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.04 Strip surface material by:

- selecting the attachment for the task at hand;
- identifying and removing surface material one layer at a time to avoid cross contaminating material;
- using full reach of equipment when stripping and dumping to increase productivity; and,
- performing ongoing visual inspection to verify minimal disturbance to underlying soils

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.05 Stockpile material by:

- selecting the attachment for the task at hand;
- determining stockpile location;
- preparing the area;
- checking for work area hazards;
- estimating the area capacity;
- determining if ramping will be required;
- creating piles with maximum volume and height without exceeding boundaries;
- smoothing off and sloping piles to promote the shedding of water; and,
- identifying grades of material and create buffer between stockpiles to prevent cross-contamination

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.06 Perform loading operations (trucks and hoppers) by:

- selecting the attachment for the task at hand;
- preparing the loading area;
- checking for work area hazards;
- positioning equipment for level, stability and shortest cycle time;
- maintaining the work area;
- visually checking tailgate of truck to make sure it is locked;
- emptying material gently into the truck to minimize impact;
- centring load to avoid spillage;
- balancing load to meet axle weight restrictions; and,
- using signals such as horns and bucket signals to alert driver

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.07 Excavate trenches, excavations and ditches by:

- selecting the attachment for the task at hand;
- checking for work area hazards;
- setting-up the machine;
- using dig patterns;
- sloping and placing spoil;
- maintaining a consistent grade;
- maintaining wall slope (trenching);
- keeping straight edges and stable slopes (mass excavations);
- maintaining walkway;
- stripping trench walls and slopes of loose rocks and other materials;
- creating a smooth trench bottom to minimize bedding and provide surface for installation of utilities, wires and pipes;
- pulling trench box while keeping box on line and on grade, without disturbing installed utilities;
- separating material in preparation for backfilling;
- creating a stable work platform using floatation mats and plates if necessary;
- creating steps or ramps to allow access to excavation area; and,

- maintaining level work area between excavation and spoil pile

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.08 Create slopes and ramps by:

- selecting the attachment(s) for the task at hand;
- determining location;
- checking for work area hazards;
- determining soil conditions and type;
- confirming specifications and calculating the slope ratio;
- maintaining adequate shoulder width and compaction;
- excavating or filling soil between survey cut stakes to achieve required grade;
- keeping tracks parallel to the slope while grading to maintain required angle;
- verifying grade using applicable instruments; and,
- preventing any loose material from falling into the work area

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations, site plans and engineered specifications.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.09 Backfill trenches and excavations by:

- selecting the attachment(s) for the task at hand;
- assessing the backfill area and structures;
- checking for work area hazards;
- following compaction specifications;
- selecting materials;
- preventing damage to structure;
- placing bedding to specifications to support utilities;
- confirming installation is complete and safe for backfilling;
- protecting piping or utilities;
- managing piles of backfill material(s);
- placing riprap using attachments;
- placing shoring using applicable attachments; and,
- placing material in lifts

according to work environment and work condition, manufacturer’s specifications (operator’s manual), government legislation and regulations, site plans and engineered specifications.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.10 Compact material with attachments by:

- selecting the attachment(s) for the task at hand;
- checking for work area hazards; and,
- operating compacting attachments to achieve required density

according to work environment and work condition, manufacturer’s specifications (operator’s manual), government legislation and regulations, site plans and engineered specifications.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.11 Perform grading operations by:

- selecting the attachment(s) for the task at hand;
- checking for work area hazards;
- working to an established grade;
- cutting or filling;
- spreading materials; and,
- maintaining surface drainage

according to work environment and work condition, manufacturer’s specifications (operator’s manual), government legislation and regulations, site plans and engineered specifications.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.12 Perform hoisting operations by:

- selecting the attachment(s) for the task at hand;
- checking for work area hazards;
- determining the weight and centre of gravity of the load;
- referring to load charts to determine safe working load of machine, attachment and rigging;
- selecting rigging methods;
- selecting rigging hardware;
- inspecting the rigging hardware;
- setting-up the machine;
- ensuring the rigging is attached to the manufacturer’s lifting point;
- checking rigging to confirm required taglines are attached;
- establishing pre-determined communication with signaller; and,
- carrying load using best practices

according to work environment and work condition, manufacturer’s specifications (operator’s manual), government legislation and regulations, site plans and engineered specifications.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9349.13 Perform demolitions by:

- selecting the attachment(s) for the task at hand;
- checking for work area hazards;
- ensuring all applicable safety devices are used (e.g. seat belts, hydraulic lock-out);
- demolishing structure or materials using attachments;
- separating recyclable materials from waste materials; and,
- applying environmental procedure requirements

according to work environment and work condition, manufacturer's specifications (operator's manual), government legislation and regulations, site plans and engineered specifications.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9350 Perform Post Operational Inspection and Storage

Heavy Equipment Operators will conduct post operation inspections of equipment for various reasons. Post operational inspections may include locking doors, turning off and locking the master switch, cycling hydraulics. At this stage, operators will also check for overall equipment damage and may clean equipment. The storage of equipment and attachments, according to requirements, is also critical to prevent damage and increase the lifespan of the equipment and/or attachments.

Skills

9350.01 Shut down excavator by:

- selecting location;
- confirming access and egress when possible;
- lowering all raised components;
- following engine shutdown procedure;
- securing equipment and attachments against movement and theft;
- installing vandalism kit;
- dismounting from excavator using three-point contact; and,
- shutting off and removing the master key

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice’s Sponsor**

9350.02 Conduct post operational inspection of excavator and attachments by:

- visually inspecting excavator and attachments including:
 - checking for wear and damage
 - checking for leaks
 - checking for missing or broken components (e.g. pins, lock nuts)
- using smell to check for problems (e.g. burnt wires, coolant or oil leak); and,
- affixing lockout tags to equipment that has been removed from service

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9350.03 Complete post operational inspection sheets by:

- recording data; and,
- documenting maintenance functions and defects in a clear, concise and legible manner

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9351 Transport Excavator and Attachments

It is important to follow recommended procedures when loading, transporting and/or unloading heavy equipment and attachments. This protects the safety of the haulage truck driver (float driver), the operator and the public as well as helps to prevent damage to the equipment and attachments. In Ontario, it is the role of the haulage truck driver to load, secure and unload. The Heavy Equipment Operator will usually assist with the task. Operators should obey the Highway Traffic Act while operating the rubber tire excavators on public roadways.

Skills

9351.01 Prepare excavator and attachments for transport by:

- performing a circle check of the machine and float;
- selecting the float;
- parking on level and solid ground free of hazards;
- blocking float wheels;
- cleaning float deck;
- lowering ramps;
- cleaning equipment and attachments to prevent debris from falling; during transportation or prevent contamination of next site;
- removing attachments and components such as buckets, counterweights and tracks as required; and,
- communicating with the float driver

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

*** A Trainer may be a Supervisor or the competent employee designated by the Apprentice’s Sponsor**

9351.02 Assist with loading excavator and attachments for transport by:

- determining how the excavator will be loaded (orientation, float type, float driver preference);
- determining if it is a standard load or over-dimensional load;
- wearing seat belt;
- selecting slowest travel mode\speed range;
- considering weather conditions;
- manoeuvring equipment onto the float while maintaining stability
- obeying hand signals;
- positioning equipment based on the directions of the float driver;
- locking the travel\swing brakes;
- lowering attachments or loading attachments onto float using rigging and quick coupler;
- engaging hydraulic lock-out; and,
- performing shutdown procedure

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9351.03 Assist in securing excavator and attachments for transport by:

- helping to tie down equipment and attachments as required;
- closing windows and doors to prevent damage during transport;
- covering exhaust pipes on stopped engines to prevent turbo damage during transport; and,
- visually inspecting excavator and attachments for loose components, debris

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9351.04 Assist with unloading excavator and attachments by:

- selecting level and firm ground free of overhead and surrounding hazards;
- identifying hazards
- setting up traffic control as required
- removing tie downs
- removing exhaust coverings
- disengaging hydraulic lock-out
- disengaging parking brakes
- removing and storing all rigging;
- blocking wheels;
- lowering and blocking ramps;
- following pre-established communication signals;
- locking brakes together;
- raising attachments;
- selecting slowest travel mode\speed range;
- obeying hand signals;
- manoeuvring equipment off the float while maintaining stability; and,
- performing a walk-around inspection to identify damage from transport

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9351.05 Operate tracked excavator on the road by:

- using seat belt, lighting and signage;
- cleaning equipment and components to prevent traffic hazards and spreading debris on roads;
- cleaning and inspecting lights/beacons/travel alarms, windows to make sure they are visible and functioning;
- placing attachments in “transport” position;
- stabilizing boom to required height to clear overhead obstacles;
- determining whether padding needs to be put down to prevent road damage (e.g. catch basin covers, underground utilities); and,
- making sure traffic control is in place

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

9351.06 Drive rubber tire excavator on the road by:

- using seat belt, lighting and signage;
- cleaning equipment and components to prevent traffic hazards and spreading debris on roads;
- cleaning and inspecting lights/beacons, windows and slow-moving signage to make sure they are visible and functioning;
- placing attachments in “transport” position;
- traveling at applicable speed for weather, traffic, and road conditions;
- stabilizing boom to required height to clear overhead obstacles; and, unlocking suspension

according to work environment and work conditions, manufacturer’s specifications (operator’s manual), government legislation and regulations and site and company policies.

(mm/dd/yy)	Trainer Print Name	*Trainer Signature
(mm/dd/yy)	Apprentice Name	Apprentice Signature

Acronyms	
BOSTA	Building Opportunities in the Skilled Trades Act
FOPS	Falling object protective structures
GPS	Global positioning system
HEO	Heavy Equipment Operator
IHSA	Infrastructure Health and Safety Association
JSA	Job safety analysis
MLITSD	Ministry of Labour, Immigration, Training and Skills Development
PPE	Personal protective equipment
ROPS	Rollover protective structures
STO	Skilled Trades Ontario
TSSA	Technical Standards and Safety Authority
WSIB	Workplace safety insurance board

Glossary of Terms

Shuttling: Picking and carrying material from one area to another

Definitions

Apprentice

- An individual who, pursuant to a registered Training Agreement, is receiving or is to receive training in a trade that is required as part of an apprenticeship program
- Holds a Training Agreement in either a compulsory or non-compulsory trade;
- Are subject to any ratios or wage rates that have been set out in regulation and or recommended by industry for their trade(s);
- Remain as an Apprentice until they receive their Certificate of Apprenticeship

BOSTA

Building Opportunities in the Skilled Trades Act, 2021 (BOSTA)

Certificate of Apprenticeship (C of A)

A certificate issued to individuals who have demonstrated that they have completed an apprenticeship program in Ontario.

Certificate of Qualification (C of Q)

A certificate issued to an individual who has completed an apprenticeship or equivalent AND passed the Certificate of Qualification examination.

Competence

The ability of an individual to perform a skill, consistently without assistance, in the workplace as set out in the Logbook.

Competency Analysis Profile (CAP Chart)

A chart that identifies the training needs of an individual trade and details the skills/skill sets that must be demonstrated during an apprenticeship program.

Journeyman

Journeyman means an individual who holds a certificate of qualification (in a compulsory or non-compulsory trade) and/or an individual who practices as a journeyman in a non-compulsory trade who does not hold a certificate of qualification and has equivalent experience in that trade.

Mandatory Skill

Status assigned to unshaded individual skills, skill sets or general performance objectives which must be signed-off for the Apprentice to complete their program.

Optional Skill

Status assigned to shaded individual skills, skill sets or general performance objectives for which sign-off is not required for the Apprentice to complete the program.

Provisional Certificates of Qualification

- A provisional Certificate of Qualification is issued to an individual who has obtained a Certificate of Apprenticeship (in both compulsory and non-compulsory trades) in a program that has a Certificate of Qualification examination, to which the individual has not yet passed the Certificate of Qualification examination.
- A provisional Certificate of Qualification shall have the prescribed term or, if no term is prescribed, a term of one year.
- In a compulsory trade, the provisional Certificate of Qualification allows a person to continue working legally in the trade for up to 12 months while they work to pass the certifying exam.
- Individuals with a provisional Certificate of Qualification are subject to any ratios and/or wage rates that have been set out for their trade(s).

Ratios

For the purpose of an Apprenticeship program, a ratio is the maximum number of Journeypersons to Apprentices. The purpose of ratios is to provide consistent supervision, training and continuity of work.

Red Seal Program

The Interprovincial Standards Red Seal Program (also known as the Red Seal Program) was established more than 50 years ago to provide greater mobility across Canada for skilled workers and represents a standard of excellence for industry. Through the program, individuals are able to obtain a Red Seal endorsement on their provincial/territorial certificates by achieving 70% or higher on an interprovincial Red Seal examination.

The Interprovincial Standards Red Seal Program acknowledges their competence and ensures recognition of their certification throughout Canada without further examination. There are currently over 50 Red Seal designated trades. **The Red Seal Program is recognized as the interprovincial *standard of excellence* in the skilled trades.** The Interprovincial Standards Red Seal Program is a partnership between the Government of Canada, the Provinces, the Territories and various stakeholders.

Sign-off

Signature of the Sponsor of record, or an individual to whom that Sponsor has delegated signing authority, (e.g. Trainer) indicating an Apprentice's demonstration of competence.

Skill

Individual competency/task described in the Logbook.

Skill Sets

Group or selection of individual skills found in the Logbook.

Skill Set Completion for Sponsors

Listing for all skill sets and includes space for sign-off by Sponsor of record.

Sponsor

Means a person that has entered into a registered Training Agreement under which the person is required to ensure that an individual is provided with workplace-based training in a trade as part of an apprenticeship program.

Sponsor of Record

Refers to the Sponsor documented as being signatory to the registered Training Agreement or Contract of Apprenticeship. In order for a Sponsor to be considered for the training of Apprentices, they must identify that the workplace has qualified persons or the equivalent on site, and can identify that the workplace has the tools, equipment, materials, and processes which have been identified by the Industry representatives for the trade.

Trainer

An individual who oversees the performance of a task and sets the workplace expectations and practices for the Apprentice. For a compulsory trade, a qualified Trainer is an individual who holds a Certificate of Qualification. In a non-compulsory trade, a Trainer is an individual who either holds a CofQ, CofA, or is considered equivalent.

Ready to Write Exam?

Many of the skilled trades in Ontario have a final certification examination that you must pass to become certified in your trade. Passing the examination gives you the right to hold yourself out as a Journeyperson and receive a Certificate of Qualification in your trade.

There are two types of trade certification examinations in Ontario:

1. Provincial (Ontario) examinations - which lead to a Certificate of Qualification.
2. Red Seal examinations – which lead to a Certificate of Qualification with an Interprovincial Red Seal endorsement.

If a trade is designated as Red Seal in Ontario, you will be writing the Red Seal examination.

To access the Red Seal preparation guide please visit: red-seal.ca

Ontario's Exam Preparation Guide

[Exam Resources – Skilled Trades Ontario](#)

Basic Examination Details for You to Know

- You will have **up to four hours to write your examination.**
- Accommodations must be requested and approved prior to scheduling your examination.
- You can leave the examination centre if you complete the examination in less than four hours.
- Exam questions are multiple choice with four options from which you must choose the correct answer. Your examination may have between 90 and 150 multiple choice questions.
- You need a mark of 70% to pass.

Scheduling Your Examination

The examination scheduling process is currently outlined in detail on the Skilled Trades Ontario website: [Exam Scheduling – Skilled Trades Ontario](#)

Remember these 3 basic steps:

1. Confirm your eligibility to write the examination with the Skilled Trades Ontario.
2. Contact Client Services at the Skilled Trades Ontario to pay your examination fee.
3. Contact the local Service Delivery Office to schedule your examination in their examination centre: <https://www.ontario.ca/page/employment-ontario-apprenticeship-offices>

Instructions for Recording a Change in Sponsor

1. Record your first sponsor's information in Sponsor Record #1 – this would be the sponsor who has signed your initial apprenticeship Training Agreement for this trade.
2. If you do change sponsors prior to completing this apprenticeship, please contact your local Ministry of Labour, Immigration, Training and Skills Development Apprenticeship Office immediately to update your sponsor record.
3. Please make sure you do record all of the information regarding any additional sponsors of record towards your apprenticeship using the Sponsor Records on the following pages (if applicable).

You must fill out a Change of Sponsor Record each time you change your sponsor.

Sponsor Record #1

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit [Skilled Trades Ontario](#) and search Sponsor Record Form.**

Change of Sponsor Record #2

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy)_____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit [Skilled Trades Ontario](#) and search Sponsor Record Form.**

Change of Sponsor Record #3

Sponsor Information		
Apprentice Name		
Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

Summary of Training	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy) _____

The Sponsor is required to sign-off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed-off.

***If you need additional copies of the Sponsor Record, visit [Skilled Trades Ontario](#) and search Sponsor Record Form.**

Appendix A — Instructions for Apprenticeship Program Completion

Once an Apprentice has completed all the classroom training and benchmark on-the-job hours specified for the trade and has acquired all the mandatory skills included in this Logbook.

The Apprentice and the Sponsor complete the Apprentice Completion Form and the Skill Set Completion for Sponsors Form located on the following pages.

1. They sign the forms and submit them to their local Service Delivery Office. To find the closest office, check the contact information at ontario.ca/page/employment-ontario-apprenticeship-offices or call the Employment Ontario toll free number at (1-800-387-5656).
2. For All Trades: All mandatory skills (or the combination indicated in the completion requirements for the trade) in the Logbook must be signed-off. The recommended hours are a benchmark. If the Sponsor is completing the Apprentice before the industry recommended training hours are done, staff may request further information regarding the Apprentice's on-the-job training. An example of a request would be a letter from the Sponsor confirming the Apprentice worked for some time in the trade before the initial Training Agreement was registered, thereby acquiring some skills beforehand.

If Apprentices are submitting the completion request form and supporting documentation to their local Service Delivery Office by mail, fax, or email (as a scanned document), they should not include their Logbook; if they are presenting this form in person at the local Service Delivery Office, they should bring their Logbook with them.

After staff verifies all the information in the completion request, they may contact either the Apprentice or the Sponsor for further information or documentation. Once the completion has been confirmed, the local Service Delivery Office will issue a Certificate of Apprenticeship to the Apprentice.

Skilled Trades Ontario will receive notification of this completion.

- If the Apprentice has completed a program in a **compulsory trade**, the Skilled Trades Ontario will automatically register the Apprentice for a Provisional certificates of qualification to continue to work legally for one year while preparing for the certification examination.
- If an Apprentice completes their apprenticeship in a **non-compulsory trade** and there is a Certificate of Qualification exam, they must write and pass the exam to receive a Certificate of Qualification from Skilled Trades Ontario.

For permission to schedule an exam once completion is confirmed, the individual must first contact the Skilled Trades Ontario Client Services Department at 647-847-3000 or toll free at 1-855-299-0028 to pay the certification examination fee. Once you have paid your exam fee with Skilled Trades Ontario, book your exam by contacting your nearest Employment Ontario local Service Delivery Office.

Appendix C – Skill Set Completion for Sponsors

You will find the skill set numbers and titles in the Logbook’s Table of Contents. By signing off each skill set in the table below, you are providing final confirmation, as the Apprentice’s Sponsor, that the Apprentice has demonstrated competency in all the mandatory skills included in the skill set.

Skill Set #	Skill Set Title	Signing Authority Signature
9342	Protect Self and Others (Pre and Post Operational Safety)	
9343	Protect Self, Others and the Environment (Operational Safety)	
9344	Organize Work	
9345	Perform Pre-Operational Inspection	
9346	Perform Scheduled and Preventative Maintenance	
9347	Inspect and Use Tools, Instruments and Equipment	
9348	Perform Basic Excavator Functions	
9349	Operate Excavator	
9350	Perform Post Operational Inspection and Storage	
9351	Transport Excavator and Attachments	

Ministry of Labour, Immigration, Training and Skills Development use only:

Sponsor verified as most recent sponsor of record: Yes () No ()
 Documentation to support completion of hours attached: Yes () No ()
 Completion of classroom training verified: Yes () No ()

Staff Name _____ Signature _____ Date _____

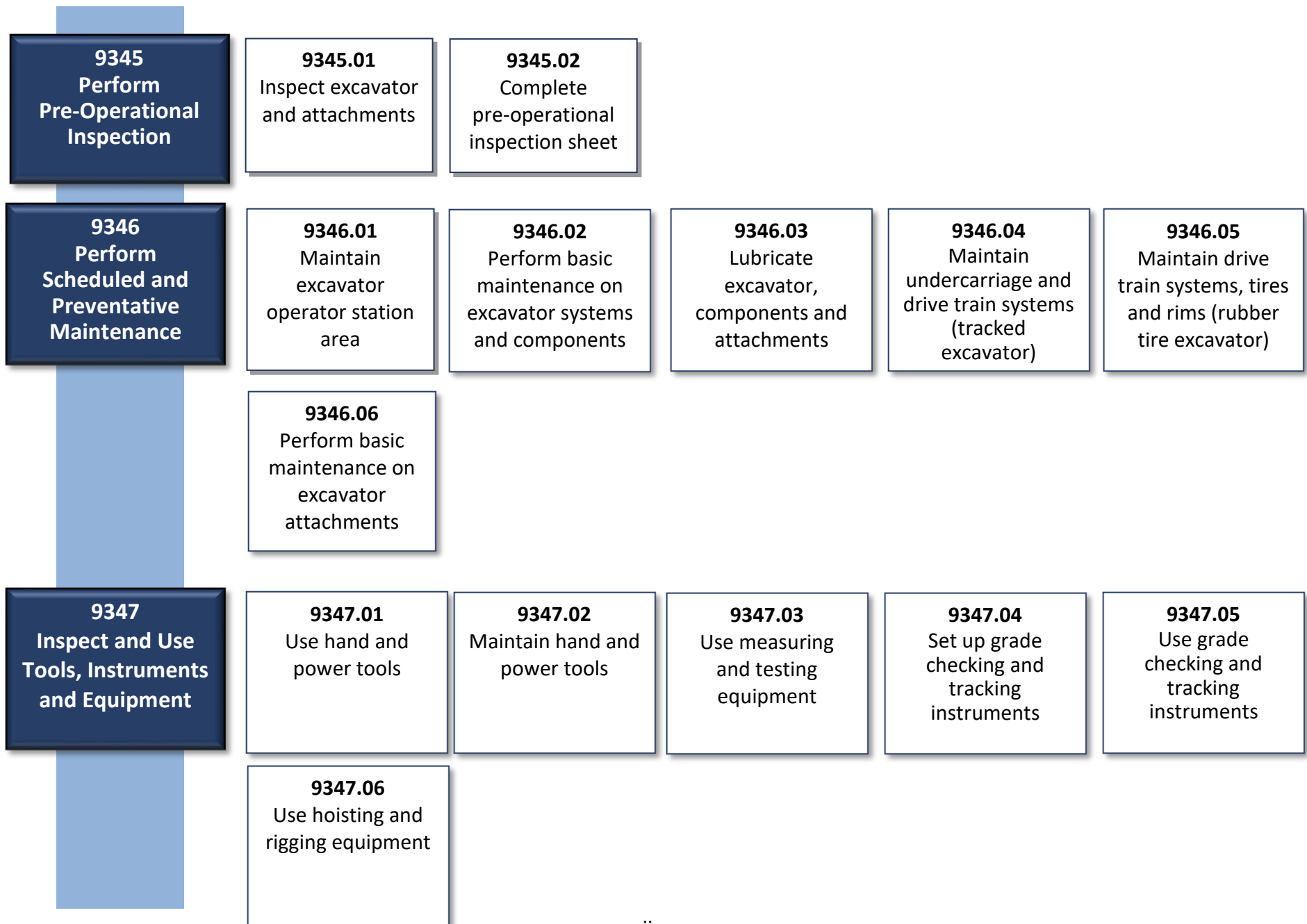
Appendix D — Local Service Delivery Offices in Ontario

For current office listings, please visit: ontario.ca/page/employment-ontario-apprenticeship-offices

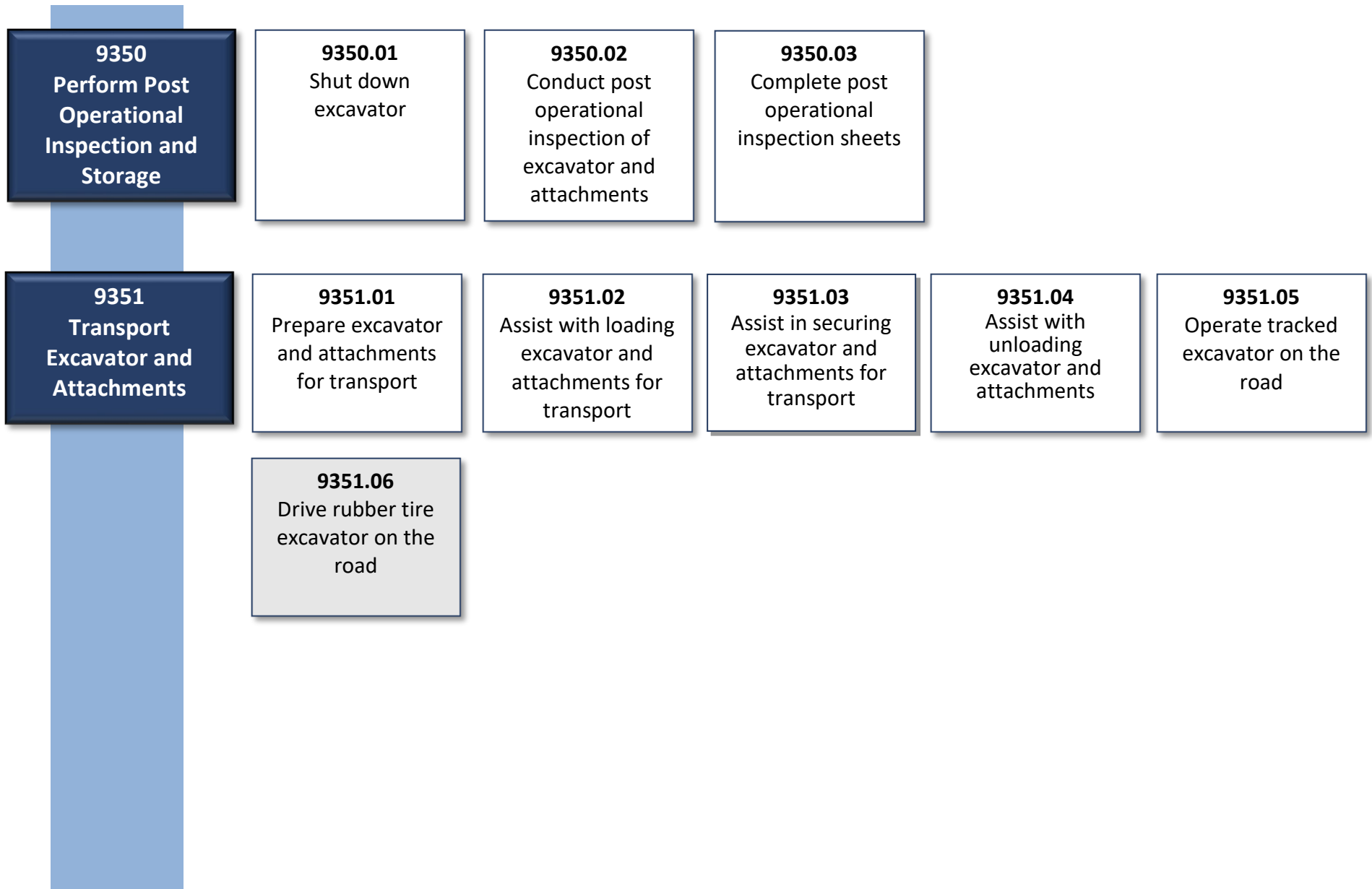
Location	Contact	Location	Contact
Barrie 705-737-1431	55 Cedar Pointe Dr Unit 609, Barrie, ON L4N 5R7	Marathon 807-346-1550	52 Peninsula Road, Suite 103 Marathon, Ontario, POT 2E0
Belleville 613-968-5558 1-800-953-6885	135 North Front St, Belleville, ON K8P 3B5	Markham 905-513-2695	140 Allstate Parkway, Suite 505, Markham, Ontario L3R 5Y8
Brantford 519-756-5197	505 Park Rd North Suite 201, Brantford, ON N3R 7K8	North Bay 705-495-8515 1-800-236-0744	200 First Ave West, North Bay, ON P1B 3B9
Chatham 519-354-2766 1-800-214-8284	870 Richmond St West 1st Floor, Chatham, ON N7M 5J5	Ottawa 613-731-7100 1-877-221-1220	Preston Square, 347 Preston Street, Suite 310, Ottawa, ON K1S 3H8
Cornwall 613-938-9702 1-877-668-6604	132 Second St East Ste 202, Cornwall, ON K6H 1Y4	Owen Sound 519-376-5790 1-800-838-9468	1450 1st Ave West, Suite 100, Owen Sound, ON N4K 6W2
Dryden 807-456-2665 1-800-734-9572	Provincial Government Building, 479 Government St, Dryden, ON P8N 3K9	Peel 905-279-7333 1-800-736-5520	The Emerald Centre, 10 Kingsbridge Garden Circle, Suite 404, Mississauga, ON L5R 3K6
Durham 905-433-0595 1-800-461-4608	78 Richmond Street West, Oshawa, ON L1G 1E1	Pembroke 613-735-3911 1-800-807-0227	615 Pembroke St East, Pembroke, ON K8A 3L7
Elliot Lake 1-800-236-8817	50 Hillside Dr North, Elliot Lake, ON P5A 1X4	Peterborough 705-745-1918 1-877-433-6555	901 Lansdowne St West, Peterborough, ON K9J 1Z5
Fort Frances 807-274-8634	922 Scott St 2nd Flr, Fort Frances, ON P9A 1J4	Sarnia 519-542-7705 1-800-363-8453	Bayside Mall, 150 Christina St North, Sarnia, ON N7T 7W5
Geraldton 807-854-1966	208 Beamish Avenue West Geraldton, Ontario POT 1M0	Sault Ste. Marie 705-945-6815 1-800-236-8817	477 Queen St East 4th Flr, Sault Ste Marie, ON P6A 1Z5
Halton 905-842-5105 1-844-901-5105	700 Dorval Dr., Suite 201, Oakville, ON L6K 3V3	St Catharines 905-704-2991 1-800-263-4475	Garden City Tower, 301 St Paul St East, 10th Flr, St Catharines, ON L2R 7R4
Hamilton 905-521-7764 1-800-668-4479	Ellen Fairclough Bldg, 119 King St West 8th Flr, Hamilton, ON L8P 4Y7	Sudbury 705-564-3030 1-800-603-5999	159 Cedar St Ste 506, Sudbury, ON P3E 6A5
Kapuskasing 705-465-5785 705-235-1950	Ontario Government Complex, 122 Government Rd West, Kapuskasing, ON P5N 2X8	Thunder Bay 807-346-1550 1-800-439-5493	189 Red River Rd Suite 103, Thunder Bay, ON P7B 1A2
Kenora 807-468-2879 1-800-734-9572	227 1/2 Second St South, Kenora, ON P9N 1G4	Timmins 705-235-1950 1-877-275-5139	Ontario Government Complex, 5520 Highway 101 East Wing B, South Porcupine, ON P0N 1H0
Kingston 613-548-1151 1-866-973-4043	Alliance Business Centre, 299 Concession St Ste 201, Kingston, ON K7K 2B9	Toronto Centre 416-927-7366 1-800-387-5656	2 St Clair West, 11 th floor Toronto, ON M4A 1L5
Kitchener 519-653-5758 1-866-877-0099	4275 King St East, Kitchener, ON N2P 2E9	Toronto South 416-326-5800	625 Church St 1st Fl, Toronto, ON M7A 2B5
London 519-675-7788 1-800-265-1050	1200 Commissioners Rd E, Unit 72, London, ON N5Z 4R3	Windsor 519-973-1441	Roundhouse Centre, 3155 Howard Ave 2nd Fl, Suite 200, Windsor, ON N8X 4Y8

9342 Protect Self and Others (Pre and Post Operational Safety)	9342.01 Conduct job safety analysis (JSA)	9342.02 Use personal protective equipment (PPE)	9342.03 Maintain personal protective equipment (PPE)	9342.04 Use operator’s manual	9342.05 Use safety equipment
	9342.06 Communicate with others	9342.07 Manage health and wellness			
9343 Protect Self, Others and the Environment (Operational Safety)	9343.01 Mount and dismount excavator	9343.02 Perform spill control procedures	9343.03 Perform erosion and sediment control procedures	9343.04 Handle materials	9343.05 Minimize the environmental footprint
9344 Organize Work	9344.01 Use documentation	9344.02 Determine methods of approach	9344.03 Interpret survey indicators and data	9344.04 Check grade	

Competency Analysis Profile: Heavy Equipment Operator – Excavator 636B *(All unshaded skill sets must be demonstrated completed)*



9348 Perform Basic Excavator Functions	9348.01 Test excavator and attachment operation in a controlled setting	9348.02 Maintain control of excavator	9348.03 Monitor performance of excavator	9348.04 Troubleshoot excavator and attachment problems	9348.05 Install excavator attachments
	9348.06 Change or remove excavator attachments	9348.07 Replace excavator attachment guards and wear components			
	9349.01 Perform excavator set-up	9349.02 Position excavator for task	9349.03 Clear and grub land	9349.04 Strip surface material	9349.05 Stockpile material
	9349.06 Perform loading operations (trucks and hoppers)	9349.07 Excavate trenches, excavations and ditches	9349.08 Create slopes and ramps	9349.09 Backfill trenches and excavations	9349.10 Compact material with attachments
	9349.11 Perform grading operations	9349.12 Perform hoisting operations	9349.13 Perform demolitions		



Completing Your Apprenticeship Program

Once your sponsor agrees you are competent in the required skills, your hours are complete and you have completed all the levels of classroom training required for your trade:

- ✓ Follow the completion instructions on the Completion Form (Appendix A) in the Logbook.
- ✓ Answer any questions that MLITSD staff may have and provide any additional completion documentation that may be required.
- ✓ Once completion is confirmed, MLITSD will issue you a Certificate of Apprenticeship and notify Skilled Trades Ontario.

After Your Apprenticeship

If you are in a trade with a certification exam, Skilled Trades Ontario will receive notice of your completion.

For compulsory trades, you will be issued a provisional Certificate of Qualification which will allow you to work legally for up to 12 months until you write and pass your examination.

For a non-compulsory trade, once you pass your examination, you will be issued a Certificate of Qualification for your trade.

Preparing For Your Exam

- **To pay for a Certificate of Qualification examination, contact Skilled Trades Ontario Client Services Department at: 647-847-3000 or toll free at 1-855-299-0028**
- **To Schedule your exam:** Once you have paid, contact your local Service Delivery Office to book your exam.
- **Download Skilled Trades Ontario exam preparation guide at:**
[Exam Resources – Skilled Trades Ontario](#) and/or view the exam preparation guide for Red Seal trades at: red-seal.ca



SkilledTradesOntario.ca



Heavy Equipment Operator (Excavator)

