



**Skilled
Trades**
Ontario

**Métiers
spécialisés**
Ontario

Apprenticeship
Training Standard
Logbook

Welder

456A

2007

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.

Welder Apprenticeship Pathway to a Certificate of Qualification

Phase 1: Registration

Submit Application for Apprenticeship Training through the on-line portal or to local Service Delivery Office

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

Training agreement signed and registered by both apprentice and sponsor

Access your Apprenticeship Training Standard Logbook**
skilledtradesontario.ca/about-trades/trades-information

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

Complete in-school training

Complete the in-class training set out in the Curriculum Training Standard established by College at an approved Training Delivery Agent.

Apprentices will be able to obtain their Red Seal Practical Requirements

All apprentices and trade qualifiers will be required to successfully complete a Practical Welding Examination prior to the written examination. Upon successful completion of both examinations, individuals will receive a Certificate of Qualification with a Red Seal Endorsement

The Welder Practical Examination will be administered in one session, six (6) hours in duration, at the end of the technical training for Level 3 Apprentices. Six welding processes will be tested: Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding or Metal Cored Arc Welding Gas Tungsten Arc Welding (GTAW), Oxy Fuel Cutting

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

Complete on-the-job training

Complete the on-the-job training set out in the Apprenticeship Training Standard Logbook established by STO

Phase 2: Apprenticeship

Review and finalize your logbook with your sponsor

Submit proof of apprenticeship completion via email, in-person or digital portal

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

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

Certificate of Apprenticeship is issued

Trades without examination

CofA is the final step of the program

Trades with examination (compulsory and non-compulsory trades)*

Provisional Certificate of Qualification issued for a 12 month term

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

Make payment for your Certificate of Qualification examination

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

Schedule a date to write your Examination

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

Pass Certificate of Qualification examination

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

Certificate of Qualification is issued

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

Phase 3: Certification

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

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*** Indicates the 6 processes of which 3 must be signed off (6007.0 – 6012.0).
Optional performances are shaded**

Please Note: This Standard has been revised to reflect the visual identity of Skilled Trades Ontario (STO) which replaced the Ontario College of Trades on January 1, 2022. The content of this Standard may refer to the former organization; however, all trade specific information or content remains relevant and accurate based on the original date of publishing.

Please refer to STO's website: skilledtradesontario.ca for the most accurate and up to date information. For information about BOSTA and its regulations, please visit [Building Opportunities in the Skilled Trades Act, 2021 \(BOSTA\)](#).

Any updates to this publication are available on-line; to download this document in PDF format, please follow the link: [Skilled Trades Ontario.ca](https://skilledtradesontario.ca).

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Maintained with transfer to Skilled Trades Ontario 2007 (V100)

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 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.

Trade Specific Resources and Links

Trade Specific 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
Skills Zone (Ontario Skills Passport)	http://www.skillszone.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 for Welder 456A 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 as 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 this trade is to be performed according to all applicable jurisdictional codes and standards and all health and safety standards must be respected and observed.

All skills within the 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 Foreword: *“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 workplace 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.

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.

Apprenticeship Program Summary/Guidelines

Scope of Practice

The Scope of Practice for the trade of Welder is set out in section 146 of Ontario Regulation 875/21 under BOSTA and reads as follows:

146. The scope of practice for the trade of welder includes the following:

1. Using and maintaining tools, material handling equipment and welding equipment.
2. Preparing the work site.
3. Laying out, cutting and forming metals to specification.
4. Fitting sub-assemblies and assemblies together and preparing assemblies for welding.
5. Welding using the shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, flux cored or metal cored arc welding, submerged arc welding and plasma arc welding processes.
6. Carrying out special processes such as welding studs and brazing.
7. Controlling for quality before, during and after welding.

*While the Logbook draws on the scope of practice regulation (Section 146 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 5280 hours as the benchmark 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 720 hours of in-school training as the duration necessary for an Apprentice to complete the in-school curriculum for this program.

Total Training Hours

6000 hours

Journeyperson to Apprentice Ratio

Industry Recommended Ratios:

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.

Program Requirements

Compulsory and Non-compulsory Classification

Regulations under the *Building Opportunities in the Skilled Trades Act, 2021*, classify each trade as either “compulsory” or non-compulsory.” This trade is non-compulsory.

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 Welder 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.

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 Skilled Trades Ontario, as it is necessary for 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's Signature	Date of start with Trainer (day/month/year)

Note on Welding Process Options:

There are six welding process performances that may be completed in the apprenticeship (see Training Units 6007.0 – 6012.0). The apprentice is required to complete at least three of them. If the apprentice plans to take the Certificate of Qualification examination (Red Seal), there is a requirement that he/she have an all-position welding certificate in Shielded Metal Arc Welding (“stick” welding) in order to be approved to write the examination.

6000.0 Use and Maintain Tools & Equipment**General Performance Objective**

Select, inspect, use and maintain hand tools, power tools, shop and metal forming equipment and measuring devices by using and maintaining metal working and trade specific hand tools and associated equipment; using and maintaining electrical, pneumatic and hydraulic power tools and associated equipment and supplies; using and maintaining shop and metal forming equipment and using and maintaining measuring devices and layout equipment so that tools and equipment are used for their intended purpose and are maintained at a standard of repair that is safe and functionally effective.

Skills

6000.01 Use and maintain metal working and trade specific hand tools and associated equipment including cutting, filing, grinding, fitting, scaling and weld inspection tools by determining the correct tool for the job, selecting the tool and required components, documenting use in a tool control system, setting up the tool, testing it, applying it to the job, monitoring its performance, adjusting its operation as necessary, monitoring operation of the tool, identifying deficiencies, replacing consumables and repairing or replacing user maintainable parts so that tools are used for their intended purpose and are maintained at a standard of repair that is safe and functionally effective.

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

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

6000.02 Use and maintain electrical, pneumatic and hydraulic power tools and associated equipment and supplies including drills, saws, grinders and scalers by identifying appropriate power supply sources, ensuring sufficient power, maintaining integrity of power supply, reporting inadequate power supply, determining the correct tool for the job, selecting the tool and required components, setting up the tool, actuating and testing it, applying it to the job, monitoring its performance, adjusting its operation as necessary, identifying operational deficiencies, replacing consumables and repairing or replacing user maintainable parts so that tools are used for their intended purpose and are maintained at a standard of repair that is safe and functionally effective.

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

6000.03 Use shop and metal forming equipment including shears, rollers and nibblers by ensuring appropriate power supply is available, maintaining integrity of power supply, reporting inadequate power supply, determining the correct equipment for the job, selecting the equipment and required components, setting up the equipment, actuating and testing it, applying it to the job, monitoring its performance and adjusting its operation as necessary, identifying operational deficiencies, replacing consumables and repairing or replacing user maintainable parts so that equipment is used for its intended purpose and is maintained at a standard of repair that is safe and functionally effective.

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

6000.04 Use and maintain measuring devices and layout equipment including measuring tapes, scales, dividers, markers by determining the correct device or equipment for the job, selecting the device and required components, setting up the device, testing it, applying it to the job, monitoring its performance and adjusting its operation as necessary, identifying deficiencies, replacing consumables and repairing or replacing user maintainable parts so that tools are used for their intended purposes and are maintained at a standard of repair that is safe and functionally effective.

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

6001.0 Use and Maintain Material Handling and Safety Equipment

General Performance Objective

Use and maintain material handling and safety equipment by selecting and inspecting rigging; positioning, employing and identifying rigging for repair; selecting and inspecting hoisting equipment; operating hoisting equipment; selecting, inspecting and erecting scaffolding; working on scaffolding and at heights; dismantling and storing scaffolds and material handling equipment so that the rigging is appropriate to the job and is used and stored correctly, lifting and hoisting equipment is adequate for the job, the lift is correctly carried out and scaffolding is erected, used, dismantled and stored properly in accordance with employer's procedures and CSA safety standards.

Skills

6001.01 Select and inspect rigging equipment by choosing appropriate equipment required for the specific lift including cable clamps, chain block hoists, chains, chokers, come-along, connectors, ropes, slings and tuggers; performing preoperational check of rigging through visual checks for defects including damaged links, frayed cables, cuts in slings, threads on shackles, and other physical defects and replacing or identifying for repair defective rigging so that rigging is correct for the job per Ontario regulation requirements and defective rigging is replaced or identified for repair in accordance with employer's procedures and CSA safety standards.

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

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

6001.02 Position and employ rigging by determining the weight, balance and size of workpiece to be moved or lifted; placing or attaching the rigging to the load and dismantling and storing the rigging equipment after use so that correct rigging is selected, placed and used to move and/or lift the workpiece, and is stored correctly and in good repair in compliance with employer's procedures, CSA safety standards, Ontario regulations and material handling guidelines.

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

6001.03 Selects and inspects hoisting and lifting equipment by; selecting equipment required including forklift, jib-crane, overhead hoist, portable boom and spreader bars; performing pre operational inspection of hoisting and lifting equipment by visually checking the cables and chains for defects including damaged links and frayed cables and identifying defective equipment so that the equipment is adequate for the job as per Ontario regulation requirements and defective hoisting and lifting equipment is identified for repair or replacement in accordance with CSA safety standards, Ontario regulations and manufacturer's procedures.

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

6001.04 Operate hoisting equipment by moving and lifting workpieces using material handling tools and equipment; communicating with other workers using hand and voice signals and storing hoisting equipment so that correct lifting and moving procedures are used in accordance with employer's procedures, manufacturer's specifications, CSA safety standards or Ontario regulation requirements.

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

6001.05 Select, inspect and erect scaffolding by selecting scaffolding for the specific job; performing pre-use inspection by visually checking all of the components for defects and erects scaffolding ensuring it is sufficient for the task, has no visual defects, is placed on a firm footing in accordance with employer's procedures, manufacturer's specifications, CSA safety standards or Ontario regulation requirements.

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

6001.06 Work on scaffolding and at heights by selecting and utilizing a fall protection system, wearing the appropriate fall protection equipment and following fall protection procedures as required by employer's procedures, CSA safety standards and Ontario regulation requirements.

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

6001.07 Dismantle and store scaffolding by disassembling scaffolding and storing it correctly and in good repair as per employer procedures and/or Ontario regulation requirements.

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

6002.0 Maintain Welding Equipment and Supplies

General Performance Objective

Maintain welding equipment and supplies by inspecting, testing, checking, identifying and reporting deficiencies; adjusting, repairing and replacing user maintainable defective components associated with oxy-fuel equipment and storing components and consumables associated with oxy-fuel and arc welding equipment so that equipment and consumables are stored and maintained at a standard of repair that is safe and functionally effective.

Skills

6002.01 Maintain oxy-fuel equipment by inspecting, testing, checking, identifying and reporting deficiencies; adjusting, repairing and replacing user maintainable defective components associated with oxy-fuel equipment including cylinders, gauges, hoses, tips, torches, and flashback arresters using leak detection solutions, oil & grease removers, wrenches, tip cleaners and hose clamps so that oxy-fuel equipment is maintained at a standard of repair that is safe and functionally effective within manufacturer's and workplace standards.

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

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6002.02 Maintain arc welding equipment by inspecting, testing, checking, calibrating, adjusting and replacing defective components associated with arc welding equipment including welding cables, electrode holders, ground clamps, feeders & guns, flow meters, shielding gas hoses using pliers, wrenches and leak detection solutions so that welding equipment is maintained at a standard of repair that is safe and functionally effective within manufacturer's and workplace standards.

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

6002.03 Store welding consumables by storing, inspecting, maintaining storage conditions, protecting and replacing defective items associated with consumables for welding including ovens, quivers, flux storage containers, cylinders, electrodes, and wire using knowledge of manufacturer's recommendations so that welding consumables are stored and maintained free from contamination and damage in accordance with CSA, ASME or an equivalent recognized workmanship standard.

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

6003.0 Prepare Work Site**General Performance Objective**

Prepare work site by planning work site lay out, setting up work area and communicating with supervisors and other workers so that work space is efficiently used, worker time and motion are reduced, work can proceed in a safe and orderly manner and communications eliminate or reduce confusion and errors.

Skills

- 6003.01 Plan work site layout** by identifying work site variables; extracting site relevant details from information sheets, drawings and specifications; taking into account effects on site layout of concurrent operations and determining work site layout and space usage so that work can proceed in a safe and orderly manner.

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

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

- 6003.02 Set up work area** by positioning equipment, machines and tools; identifying site relevant safety concerns and removing or avoiding hazards and occupying available work space so that there are sufficient lighting and ventilation, reduced interference from competing work activities, safe and efficient movement in the work space, sequence of operations is effective and non-productive activities are minimized.

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

- 6003.03** **Communicate/consult with supervisor, technical advisor and other workers** to ensure that the types of metals to be joined and the geometry of prepared shapes are as specified by shop drawings, the shop supervisor or the customer.

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

6004.0 **Lay Out, Cut and Form Metal to Specification**

General Performance Objective

Lay out, cut and form metal to specification by preparing job layout; cutting metal to size using one of several processes; forming metal to required design; preparing welding joints and selecting material preparation method so that the finished product meets the requirements of the job specification.

Skills

- 6004.01** **Prepare job layout** by reading and interpreting fabrication documents, blue prints and drawings; identifying dimensions, materials, tolerances, notes and symbols; making rough sketches of fabrication job; selecting required stock and transferring dimensions to job layout so that layout is completed in accordance with fabrication documents and with efficient use of materials.

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

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

6004.02 **Cut metal with oxy-fuel equipment** by selecting fuel gases, tips, pressures required, personal equipment and tools and assembling them; activating the equipment; making straight line, circle, bevel and piercing cuts and shutting down the equipment so that equipment is set up and used in accordance with manufacturer's instructions for the intended application and the cut is made to specification.

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

6004.03 **Cut and gouge metal with air carbon arc equipment** by selecting power source, electrodes, pressurized air, personal equipment and tools and assembling them; activating the equipment; making the required cut and shutting down the equipment so that equipment is set up and used in accordance with manufacturer's instructions for the intended application and the cut is made to specification.

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

6004.04 **Cut metal with SMAW cutting equipment** by selecting power source, electrodes, amperage and polarity setting, personal equipment and tools and assembling them; activating the equipment; making the required cut and shutting down the equipment so that equipment is set up and used in accordance with manufacturer's instructions for the intended application and the cut is made to specification.

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

6004.05 **Cut metal with plasma arc equipment** by selecting orifice size, gas, gas pressure and heat settings, personal equipment and tools and assembling them; activating the equipment; making straight line, circle, bevel and piercing cuts and shutting down the equipment so that equipment is set up and used in accordance with manufacturer's instructions for the intended application and the cut is made to specification.

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

6004.06 **Cut metal using hand tools** including hacksaws, snips, chisels, reamers, hand shears and pipe cutters by selecting the tool; checking the tool's operation and condition and making the required cut so that the tool is appropriate to the job; the tool is in good working condition; the tool is operated properly in accordance with manufacturer's recommendations and the cut is made to specification.

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

6004.07 **Cut metal using power tools** including power shears, power saws, grinders, nibblers, notchers and punching machines by selecting the tool; installing consumables; adjusting the power tool's scope of operation; checking the power tool's performance and condition and making the required cut so that the tool is appropriate to the job; the tool is properly adjusted and in good working condition; the tool is operated properly in accordance with manufacturer's recommendations and the cut is made to specification.

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

6004.08 Form metal to specified design using equipment such as rollers, benders, crimpers and beaders by selecting the equipment; adjusting the equipment's scope of operation; checking the equipment's performance and condition and applying the equipment to the work so that equipment is appropriate to the job; the equipment is properly adjusted and in good working condition; the equipment is operated properly in accordance with manufacturer's recommendations and the operation is done to specification.

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

6004.09 Prepare welding joints by using equipment such as grinders and beveling machines so that weldment edges meet the requirements of the welding specification.

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

6004.10 Select material preparation method such as flame cutting, grinding or nibbling so that distortion of components is minimized.

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

6005.0 Fit Sub-Assemblies and Assemblies**General Performance Objective**

Fit sub-assemblies and assemblies by making jigs, fixtures and templates; checking measurement and fit of components; pre-heating components or assemblies; performing tack welding and planning for control of distortion so that measurements are within tolerances allowed, assemblies are dimensionally stable and fitting/ tacking facilitates welding.

Skills

- 6005.01 Make jigs, fixtures and templates with or without actual components** by identifying requirements from drawings and plans; creating jigs and fixtures to ensure materials are aligned and held in position for welding and creating templates to layout patterns so that the jigs, fixtures and templates are effective in maintaining dimensional stability during and after welding.

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

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

- 6005.02 Check measurements and fit of components** by performing trial fit of assemblies; using measuring tools and layout equipment to correct errors in alignment and measurement so that linear and geometric measurements are within the tolerances required by drawings, specifications or standards.

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

6005.03 Pre-heat components or assembly by selecting preheat equipment and measuring devices; planning preheat sequence and procedure; applying heat so that work is prepared for assembly and interpass temperatures are maintained without causing distortion or excessive residual stresses.

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

6005.04 Perform tack welding by applying the correct tacking sequence so that intended root openings are maintained and do not impede the weld process.

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

6005.05 Plan for the control of distortion by applying stiffeners, presetting parts, using back to back (neutral axis) assembly of similar components and flame straightening or cold straightening prior to tacking so that distortion is limited.

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

6006.0 Prepare Assembly for Welding**General Performance Objective**

Prepare assembly for welding by planning sequence of operations; verifying fabricated materials and assemblies; preparing the job for welding; ensuring correct consumables are on hand and checking weld joint fit up and condition so that the assembly is prepared to meet the preconditions for welding, allowing the job to be carried out efficiently and effectively without wasting time or resources.

Skills

6006.01 Plan sequence of operations by reading and interpreting weld procedure specifications, employer's procedures, data sheets, codes, standards or contract documents; confirming dimensions, materials, tolerances, notes, symbols, weld sizes and locations; determining adequacy of weld preparation and type and size of weld consumables; confirming pre-heat interpass and post heat requirements, welding process(s), parameters and electrical characteristics; identifying sequence of operation and inspection requirements so that the sequence of operations minimizes distortion and prevents avoidable repetition, waste and unacceptable quality of welds.

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

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

6006.02 Verify fabricated materials and assemblies by obtaining all required materials and assemblies as described on the blue print or the bill of materials; verifying through stamping or other identification processes or systems; verifying that lifting equipment, positioning equipment, jigs and/or fixtures, preheat gear, preheat monitoring gear, welding power source and attachments (feeders), fume extraction equipment, air power tools and electrical power tools are available and obtain if necessary so that materials classification, size and condition are correct.

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

6006.03 **Prepare job for welding** by ensuring the weldment can be manipulated safely and effectively; reporting to proper authority any discrepancies or errors for correction and carrying out any required pre-heating so that all welding and inspection operations can be completed as specified.

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

6006.04 **Ensure correct consumables are on hand** by reading and interpreting weld procedure specification documents or following directions of supervisor; identifying the correct welding consumable required; verifying location of welding consumable storage and the availability of electrode conditioning and storage ovens and electrode quivers if required so that all welding operations can be completed as specified to the level of efficiency required by the employer.

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

6006.05 **Check that the weld joint fit up, tack weld locations and size and fixture condition** are in accordance with the applicable welding specification or accepted shop practice.

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

6006.06 **Check that joints to be welded are clean and dry in each weld location** in accordance with the applicable weld specification or accepted shop practice.

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

6007.0 *Weld with the Shielded Metal Arc Welding (SMAW) Process**General Performance Objective**

Weld with the shielded metal arc welding (SMAW) process by selecting power source and setting up welding equipment; installing electrode; adjusting welding process parameters; fillet welding; groove welding; cleaning welds and measuring welds so that processes are correctly completed in accordance with manufacturer's instructions and the applicable standard.

NOTE: A minimum of three of the general performance objectives 6007.0 to 6012.0 must be fully signed off (i.e., all performance objectives must be completed).

Skills

6007.01 Select and set up welding equipment by selecting power source, welding cable assemblies, electrode holder, electrode type and size, personal equipment and tools, and assembling them so that all the equipment necessary to weld using the SMAW process is available and is correctly set up in accordance with manufacturer's instructions for the intended application.

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

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

6007.02 **Install electrode** by extracting requirements from the applicable welding procedure or following directions of supervisor; identifying the type and size of filler metal for the welding position, joint type, and the composition and thickness of the base material and mounting these consumables so that the correct electrode is installed in accordance with manufacturer's instructions for the intended application.

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

6007.03 **Adjust and verify welding process parameters** by choosing the equipment configuration which meets the specified requirements for size and quality of weld including testing the settings and adjusting the operation of the equipment so that the correct balance of penetration, fusion, profile and weld size is achieved for the welding application and that it meets the weld inspection requirements of the applicable fabrication standards such as; CSA, ASME or an equivalent recognized workmanship standard.

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

6007.04 Fillet weld using the SMAW process on lap, corner and tee joints in all positions using plate, tube or pipe to plate assemblies of single or multiple passes, with any one of mild steel, stainless steel or other alloys in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or an equivalent recognized workmanship standard.

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

6007.05 Groove weld using the SMAW process on either flare and single bevel joints, square and single vee joints or 5G/6G pipe/tube, with solid backing, in all positions, using any one of mild steel, stainless steel or other alloys in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard. *NOTE:* Joints without solid backing may substituted for joints with solid backing.

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

6007.06 Clean welds using wire brush, descaler, grinder or other appropriate abrasive process so that welds are free of slag, scale surface irregularities and meet the weld inspection requirements of the applicable fabrication standards such as; CSA, ASME or equivalent recognized workmanship standard.

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

6007.07 Measure welds for completeness using fillet gauges, measuring tape or other devices so that welds meet the requirements specified by the engineering drawings or company procedures and the applicable fabrication standards such as; CSA, ASME or equivalent recognized workmanship standard.

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

6008.0 *Weld with the Gas Metal Arc Welding (GMAW) Process**General Performance Objective**

Weld with the gas metal arc welding (GMAW) process by selecting and setting up welding equipment; installing consumables; adjusting welding process parameters; fillet welding; groove welding; cleaning welds and measuring welds so that process operations are correctly performed in accordance with the weld procedure, equipment manufacturer's recommendations and the requirements of the applicable standard.

NOTE: A minimum of three of the general performance objectives 6007.0 to 6012.0 must be fully signed off (i.e., all performance objectives must be completed).

Skills

6008.01 Select and set up welding equipment by selecting power source, feeder, welding cable assemblies, welding gun, gun liners, gas distributor, gas cup and seals, contact tubes, flow meter, purging equipment, personal equipment and tools, and assembling them so that all the equipment necessary to weld using the GMAW process is available and is correctly set up or installed in accordance with manufacturer's instructions for the intended application.

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

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

6008.02 Install consumables by extracting requirements from the applicable welding procedure or following directions of supervisor; identifying the correct shielding gas or gas mixture, purging equipment and the type and size of filler metal for the welding position, joint type, and the composition and thickness of the base material and mounting these consumables so that the correct gas and filler wire are installed in accordance with manufacturer's instructions for the intended application.

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

6008.03 **Adjust and verify welding process parameters** by choosing the equipment configuration which meets the specified requirements for size and quality of weld including voltage and wire feed speed, and shielding gas flow rate; purge flow rate and purge time; testing the settings and adjusting the operation of the equipment so that the correct balance of penetration, fusion, profile and weld size is achieved for the welding application and that it meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6008.04 **Fillet weld using the GMAW process** on lap and corner and tee joints in the flat and horizontal and vertical positions, using plate, tube or pipe to plate assemblies with any one of mild steel, stainless steel, aluminum or other alloys, in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6008.05 Groove weld using the GMAW process on either flare and single bevel joints, square and single vee joints or 5G/6G pipe/tube, with backing, in the flat, horizontal and vertical positions, on plate or pipe using any one of; mild steel, stainless steel, aluminum or other alloys, in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard. *NOTE:* Joints without solid backing may substituted for joints with solid backing.

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

6008.06 Clean welds using wire brush, descaler, grinder or other appropriate abrasive process so that welds are free of slag, scale surface irregularities and meet the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6008.07 Measure welds for completeness using fillet gauges, measuring tape or other devices so that welds meet the requirements specified by the engineering drawings or company procedures and the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6009.0 *Weld with the Gas Tungsten Arc Welding (GTAW) Process

General Performance Objective

Weld with the gas tungsten arc welding (GTAW) process by selecting and setting up welding equipment; installing consumables; adjusting welding process parameters; fillet welding; groove welding; cleaning welds and measuring welds so that processes are correctly completed in accordance with manufacturer's instructions and the applicable standard.

NOTE: A minimum of three of the general performance objectives 6007.0 to 6012.0 must be fully signed off (i.e., all performance objectives must be completed).

Skills

- 6009.01 Select and set up welding equipment** by selecting welding machine (power source), welding cable assemblies, welding torch, gas cup, gas screen, purging equipment, personal equipment and tools as required and assembling them so that all the equipment necessary to weld using the GTAW process is available and is correctly set up or installed in accordance with manufacturer's instructions.

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

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

6009.02 **Install consumables** by choosing the shielding gas, purging equipment and the type and size of filler rod, tungsten electrode type and size, shapes tungsten electrode for the welding application and the composition and thickness of the base material so that the correct shielding gas, tungsten and filler rod are installed in accordance with manufacturer's instructions or accepted shop practice.

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

6009.03 **Adjust and verify welding process parameters** by choosing the equipment configuration which meets the specified requirements for size and quality of weld including shielding gas flow rate; purge flow rate and purge time; testing the settings and adjusting the operation of the equipment so that the correct balance of penetration, fusion, profile and weld size is achieved for the welding application and that it meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6009.04 Fillet welds using the GTAW process on lap, corner and tee joints in all positions using plate, tube or pipe to plate assemblies using single or multiple passes, using any one of mild steel, stainless steel, aluminum or other alloys, in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6009.05 Groove welds using the GTAW process on vee or tube/pipe joints with backing in all positions using plate or pipe assemblies by using single or multiple passes so that passes are done in the correct sequence, each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard. *NOTE:* Joints without solid backing may substitute for joints with solid backing.

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

6009.06 **Clean welds** using wire brush, grinder or other appropriate abrasive process so that welds are free of oxides and meet the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6009.07 **Measure welds for completeness** using fillet gauges, measuring tape or other devices so that welds meet the requirements specified by the engineering drawings, company procedures and the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6010.0 ***Weld with the Flux Cored or Metal Cored Arc Welding (FCAW or Mcaw) Process**

General Performance Objective

Weld with the flux cored/metal cored arc welding (FCAW, MCAW) process by selecting and setting up welding equipment; installing consumables; adjusting welding process parameters; fillet welding; groove welding; cleaning welds and measuring welds so that process operations are correctly performed in accordance with the weld procedure, equipment manufacturer's recommendations and the requirements of the applicable standard.

NOTE: A minimum of three of the general performance objectives 6007.0 to 6012.0 must be fully signed off (i.e., all performance objectives must be completed).

Skills

6010.01 Select and set up welding equipment by selecting power source, feeder, welding cable assemblies, welding gun, gun liners, gas distributor, gas cup and seals, contact tubes, flow meter, personal equipment and tools, and assembling them so that all the equipment necessary to weld using the FCAW/MCAW process is available and is correctly set up or installed in accordance with manufacturer's instructions for the intended application.

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

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

6010.02 Install consumables by interpreting the applicable welding procedure or following directions of supervisor; identifying the correct shielding gas and the type and size of filler metal for the welding position, joint type, and the composition and thickness of the base material and mounting these consumables so that the correct gas and filler wire are installed in accordance with manufacturer's instructions for the intended application.

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

6010.03 **Adjust and verify welding process parameters** by choosing the equipment configuration which meets the specified requirements for size and quality of weld including voltage and wire feed speed and shielding gas flow rate; testing the settings and adjusting the operation of the equipment so that the correct balance of penetration, fusion, profile and weld size is achieved for the welding application and that it meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6010.04 **Fillet weld using the FCAW or MCAW process** on lap, corner and tee joints in the flat, horizontal and vertical positions using plate, tube or pipe to plate assemblies and single or multiple passes, using any one of mild steel, stainless steel or other alloys, in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6010.05 Groove weld using the FCAW or MCAW process with full penetration on either flare and single bevel joints or square and single vee joints, either back gouged or with backing, in the flat, horizontal and vertical positions, using mild steel, stainless steel, or other alloys, in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6010.06 Clean welds using wire brush, descender, grinder or other appropriate abrasive process so that welds are free of slag, scale surface irregularities and meet the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6010.07 Measure welds for completeness using fillet gauges, measuring tape or other devices so that welds meet the requirements specified by the engineering drawings or company procedures and the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6011.0 *Weld with the Submerged Arc Welding (SAW) Process**General Performance Objective**

Weld with the submerged arc welding (SAW) process by installing consumables; adjusting welding parameters; fillet welding; groove welding; cleaning welds and measuring welds so that process operations are correctly performed in accordance with the equipment manufacturer's recommendations and the requirements of the applicable standard.

NOTE: A minimum of three of the general performance objectives 6007.0 to 6012.0 must be fully signed off (i.e., all performance objectives must be completed).

Skills

- 6011.01 Install consumables** by extracting requirements from the applicable welding procedure or following directions of supervisor; identifying the correct type and size of electrode, type of flux, guide and contact tube sizes for the welding position, joint type, and the composition and thickness of the base material and mounting these consumables so that the correct flux and filler metal are installed in accordance with manufacturer's instructions for the intended application.

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

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

6011.02 Adjust and verify welding process parameters by choosing the equipment configuration which meets the specified requirements for size and quality of weld including voltage, wire feed speed and flux; testing the settings and adjusting the operation of the equipment so that the correct balance of penetration, fusion, profile and weld size is achieved for the welding application and that it meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6011.03 Fillet weld using the SAW process on lap and tee joints in the flat and horizontal positions, using mild steel or stainless steel in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6011.04 Groove weld using the SAW process on full penetration single or double bevel or Vee or U joints, with solid backing in the flat position, using mild steel or stainless steel in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6011.05 Clean welds using wire brush, descaler, grinder or other appropriate abrasive process so that welds are free of slag, scale surface irregularities and meet the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6011.06 Measure welds for completeness using fillet gauges, measuring tape or other devices so that welds meet the requirements specified by the engineering drawings or company procedures and the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6012.0 *Weld with the Plasma Arc Welding (PAW) Process**General Performance Objective**

Weld with the plasma arc welding (PAW) process by setting up welding equipment; installing consumables; adjusting welding parameters; fillet welding; groove welding; cleaning welds and measuring welds so that processes are correctly completed in accordance with manufacturer's instructions and the applicable standard.

NOTE: A minimum of three of the general performance objectives 6007.0 to 6012.0 must be fully signed off (i.e., all performance objectives must be completed).

Skills

- 6012.01 Set up welding equipment** by configuring welding machine (power source), welding cable assemblies, welding torch, gas cup, shielding gas types, purging equipment, tungsten electrode type and size and assembling them so that all the equipment necessary to weld using the PAW process is available and is correctly set up or installed in accordance with manufacturer's instructions.

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

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

- 6012.02 Install consumables** by choosing the shielding gases, purging equipment and the type and size of filler rod for the welding application and the composition and thickness of the base material so that the correct gases and filler rod are deployed in accordance with manufacturer's instructions.

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

6012.03 Adjust welding parameters by connecting the power source to the available power supply; connecting the worklead clamp to bare metal on the component to be welded; selecting the correct polarity; adjusting current, purge flow rate and purge time and gas flow rates by following either written or verbal instructions; testing the settings and adjusting the operation of the equipment so that the correct balance of penetration, fusion, profile and weld size is achieved for the weld and that it meets the requirements of the applicable standards including CSA, ASME or equivalent recognized workmanship standard.

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

6012.04 Groove weld using the PAW process on single bevel or square or single vee joints, with backing, in the flat, horizontal and vertical positions, using any one of mild steel, stainless steel, aluminum or other alloys, in the work environment identified by the employer so that passes are done in the correct sequence and each pass of the weld meets the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6012.05 **Clean welds** using wire brush, grinder or other appropriate abrasive process so that welds are free of oxide and surface irregularities and meet the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

6012.06 **Measure welds for completeness** using fillet gauges, measuring tape or other devices so that welds meet the requirements specified by the engineering drawings, company procedures and the applicable standards including C.S.A., ASME or equivalent recognized workmanship standard.

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

6013.0 Braze Metal**General Performance Objective**

Braze deoxidized copper with the oxy-fuel-gas(OFG) process by selecting and configuring oxy-fuel-gas apparatus; obtaining consumables; brazing lap and tee joints and carrying out shut down procedures so that process operations are correctly performed in accordance with the equipment manufacturer's recommendations and the requirements of the applicable standard.

Skills

- 6013.01 Select and configure oxy-fuel-gas heating equipment** by selecting torch, heating tip, filler alloy type and diameter, flux type, adjusting gas pressures selecting personal equipment and tools, and assembling them so that all the equipment necessary to braze deoxidized copper using the oxy-fuel-gas (OFG) process is available and is correctly set up in accordance with manufacturer's instructions for the intended application.

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

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

- 6013.02 Obtain consumables** by determining the applicable brazing procedure or following directions of supervisor; identifying the type and size of filler metal and flux type so that the correct consumables are available for the intended application in accordance with the brazing procedure specification or applicable standards.

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

6013.03 Braze lap and tee joints by choosing the equipment configuration including fuel gas, oxygen pressures and heating tip sizes; testing the settings and adjusting the operation of the equipment; preparing the joint ; preheating the joint and adding the filler alloy so that the correct combination of penetration, fill and flow of filler alloy through the joint is achieved, the correct joint profile and size are achieved for the brazing application and that it meets the inspection requirements of the applicable fabrication standards such as ASME or an equivalent recognized workmanship standard.

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

6013.04 Carry out shut down procedure by storing heating equipment, post cleaning braze joint assemblies, removing residual fluxes so that the joint is capable of performing in the intended service environment.

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

6014.0 Weld Studs**General Performance Objective**

Weld with stud welding process by selecting and setting up welding equipment; installing consumables; welding studs; removing ferrules; inspecting and testing welds and repairing failed welds so that the process operations are correctly performed in accordance with the weld procedure, the equipment, the stud manufacturer's recommendations and the requirement of the applicable standard.

Skills

6014.01 Select and set up welding equipment by selecting power source, weld gun, stud, ferrule, personal equipment and tools, and assembles them so that all the equipment necessary to weld using the stud welding process is available and is correctly set up or installed in accordance with the manufacturer's instructions for the intended application.

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

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

6014.02 Install consumables by extracting requirements from the applicable welding procedure or following directions of supervisor; identifying the correct stud and ferrule for the task, placing the stud in the weld gun chuck and positioning the ferrule so that the correct stud is installed in accordance with manufacturer's instructions for the intended application.

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

6014.03 Weld studs by adjusting and verifying the welding process parameters including choosing the equipment configuration that meets the requirements for the size of stud specified; choosing machine setting and ferrule size; testing the settings and adjusting the operation of the equipment so that the correct installation is achieved and meets the requirements of the applicable welding standards.

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

6014.04 Remove ferrules from welded studs and checks welds for desirable characteristics by visually inspecting and interpreting the appearance of the weld and testing in accordance with the drawings, applicable codes and manufacturer's specifications using either a bend test, torque test or tension test.

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

6014.05 Repair a failed weld by adding fillet weld using an appropriate process or removing the unacceptable stud and repairing any pockets in the parent metal and making it smooth and flush as required by applicable codes and manufacturer's specifications.

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

6015.0 Control for Quality While Welding**General Performance Objective**

Carries out quality control, while welding by complying with quality control and other standards; ensuring ongoing weld quality and bench marking weld quality so that the weld meets the acceptance criteria of the applicable standard.

Skills

6015.01 Comply with company quality control standards, customer standards and code requirements by reading and following identified company quality assurance procedures and specific code requirements so that the weld meets the acceptance criteria of the applicable standard.

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

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

6015.02 Ensure ongoing weld quality by maintaining correct travel speed, size and contour of weld deposit, arc length or wire stick out, electrode angle (both travel and work), maintaining pre-heat and interpass temperature and monitoring weld joint cleanliness so that the weld meets the quality standards identified.

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

6015.03 Benchmark weld quality by examining joint configurations, tacks and weld passes for defects and inconsistencies, taking the appropriate corrective action(s) so that the weld meets the quality standards identified.

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

6016.0 Carry Out Post-Weld Quality Control

General Performance Objective

Carry out post-weld quality control by visually inspecting welds; performing post- weld product control of weldment temperature; correcting excessive welding distortion; performing non-destructive checks and preparing weld samples and performing destructive tests so that post-weld inspection and tests are carried out in accordance with the weld inspection requirements of the applicable fabrication standards.

Skills

6016.01 Visually inspect welds by identifying common welding discontinuities such as cracks, inadequate penetration, incomplete fusion, porosity, unfilled craters, slag inclusions, incorrect weld size, undercut, arc strikes and distortion and detecting them using appropriate inspection tools and methods so that discontinuities are detected without error in accordance with the weld inspection requirements of the applicable fabrication standards such as CSA, ASME or equivalent recognized workmanship standard.

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

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

6016.02 Perform post-weld product control of weldment temperature by use of temperature indicating devices in accordance with the applicable weld procedure or manufacturer's guidelines.

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

6016.03 Correct excessive welding distortion by use of the correct combination of thermal or mechanical methods to restore the weldment to meet design requirements.

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

6016.04 Perform any non-destructive check such as magnetic particle, dye-penetrant, radiography or ultrasonic to identify weld discontinuities in accordance with industry standards.

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

6016.05 Prepare weld samples and perform destructive tests such as fracture test and welder performance bend test to verify that the sample meets the acceptance criteria of the applicable standard.

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

6017.0 Demonstrate Safe Working Practices and Procedures

General Performance Objective

Demonstrate safe working practices and procedures by identifying and taking corrective action against potential workplace health and safety hazards; handling, storing and disposing of hazardous workplace materials; complying with workplace legislation relating to health and safety; wearing and maintaining personal protective equipment and practicing good housekeeping in the workplace in accordance with relevant legislation, manufacturer's recommendations and company policies.

Skills

6017.01 Identify and take corrective action against potential workplace health and safety hazards including: noxious fumes and dust, high intensity light, fires, elevated work sites, suspended loads, poor lighting, extreme temperatures, inadequate ventilation, confined spaces, untidy work sites and uncontrolled power sources so that the potential for personal injury and damage to equipment and the environment are minimized in accordance with applicable manufacturer's instructions, government regulations and company policies.

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

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

- 6017.02 Handle, store and dispose of hazardous workplace materials** including lead, gases, acids and solvents so that individuals are protected from injury, the environment from contamination and safety practices are followed in accordance with WHMIS, OHSA, manufacturer's instructions and company procedures and policies.

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

- 6017.03 Comply with workplace legislation relating to health and safety** including the Workplace Hazardous Materials Information Systems (WHMIS) guidelines and the Occupational Health and Safety Act.

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

- 6017.04 Wear and maintain personal protective equipment** including eye, ear, hand, respiratory, body and foot protection, ensuring that correct fit and optimum protection is provided to the wearer for the specific task performed in accordance with applicable government regulations, manufacturer's specifications and company policy.

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

6017.05 Practice good housekeeping in the workplace by ensuring that the workplace is clean, organized and free of obstructions, spills or fire hazards; that materials and equipment are cleaned and stored in designated areas after use and that protective barriers, UV shields and guards are erected so that accident or injury potential is minimized.

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

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 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.

Journey person

Journey person means an individual who holds a certificate of qualification (in a compulsory or non-compulsory trade) and/or an individual who practices as a journey person 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, skills 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 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 Your 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 Skilled Trades Ontario.
2. Contact Client Services at 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 Service Delivery Office immediately to update your sponsor record.
3. Please make sure you record all 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 SkilledTradesOntario.ca 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 SkilledTradesOntario.ca 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 SkilledTradesOntario.ca and search Sponsor Record Form.**

Change of Sponsor Record #4

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 SkilledTradesOntario.ca 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**, Skilled Trades Ontario will automatically register the Apprentice for a Provisional Certificate 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 B — Apprentice Completion Form

Please fill out both sides of this form, including the Skill Set Completion for Sponsors (see back of form). Once both sides are completed, submit the form to your local Service Delivery Office (find contact information at ontario.ca/page/employment-ontario-apprenticeship-offices or by calling Employment Ontario at (1-800-387-5656).

Apprentice Information	
Name (print)	
Client ID # Issued by Ministry	
Telephone Number(s)	

Sponsor Information	
Legal Name	
Address	
Telephone Number(s)	
Sponsor's Signing Authority (<i>print name</i>)	
E-mail Address	

Program Information	
Trade Name	
Number of hours required as per Training Agreement (<i>hours-based trades only</i>)	
Hours completed? (<i>documentation attached</i>)	Yes () No () Not applicable ()
Classroom training completed or exempt?	Yes () No () Not applicable ()

I hereby confirm that the information submitted on both sides of this form is true and accurate.

X _____
Apprentice's Signature Date

X _____
Signature of Sponsor's Signing Authority Date

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
6000.0	Use and Maintain Tools and Equipment	
6001.0	Use and Maintain Material Handling and Safety Equipment	
6002.0	Maintain Welding Equipment and Supplies	
6003.0	Prepare Work Site	
6004.0	Lay Out, Cut and Form Metals to Specification	
6005.0	Fit Sub-Assemblies and Assemblies	
6006.0	Prepare Assembly for Welding	
*6007.0	*Weld with the Shielded Metal Arc Welding (SMAW) Process	
*6008.0	*Weld with the Gas Metal Arc Welding (GMAW) Process	
*6009.0	*Weld with the Gas Tungsten Arc Welding (GTAW) Process	
*6010.0	*Weld with the Flux Cored or Metal Cored Arc Welding (FCAW or MCAW) Process	
*6011.0	*Weld with the Submerged Arc Welding (SAW) Process	
*6012.0	*Weld with the Plasma Arc Welding (PAW) Process	
6013.0	Braze Metal	
6014.0	Weld Studs	
6015.0	Control for Quality While Welding	
6016.0	Carry Out Post-Weld Quality Control	
6017.0	Demonstrate Safe Working Practices and Procedures	

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 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, P0T 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	162 Lochiel Street, Suite 101, Sarnia, ON N7T 7W5
Geraldton 807-854-1966	208 Beamish Avenue West Geraldton, Ontario P0T 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

Competency Analysis Profile (CAP) Chart

NOTE: For Skill Sets 6007.0 to 6012.0, 3 out of 6 must be completed

6000.0 Use and Maintain Tools & Equipment	6000.01 Use and maintain metal working and trade specific hand tools and associated equipment	6000.02 Use and maintain electrical, pneumatic and hydraulic power tools & associated equipment and supplies	6000.03 Use shop and metal forming equipment	6000.04 Use and maintain measuring devices and layout equipment	
6001.0 Use and Maintain Material Handling and Safety Equipment	6001.01 Select and inspect rigging equipment	6001.02 Position and employ rigging	6001.03 Select and inspect hoisting and lifting equipment	6001.04 Operate hoisting equipment	6001.05 Select, inspect and erects scaffolding
	6001.06 Work on scaffolding and at heights	6001.07 Dismantle and stores scaffolding			
6002.0 Maintain Welding Equipment and Supplies	6002.01 Maintain oxy-fuel equipment	6002.2 Maintain arc welding equipment	6002.03 Store welding consumables		
6003.0 Prepare Work Site	6003.01 Plan work site layout	6003.02 Set up work area	6003.03 Communicate/consult with supervisor, technical advisor and other workers		

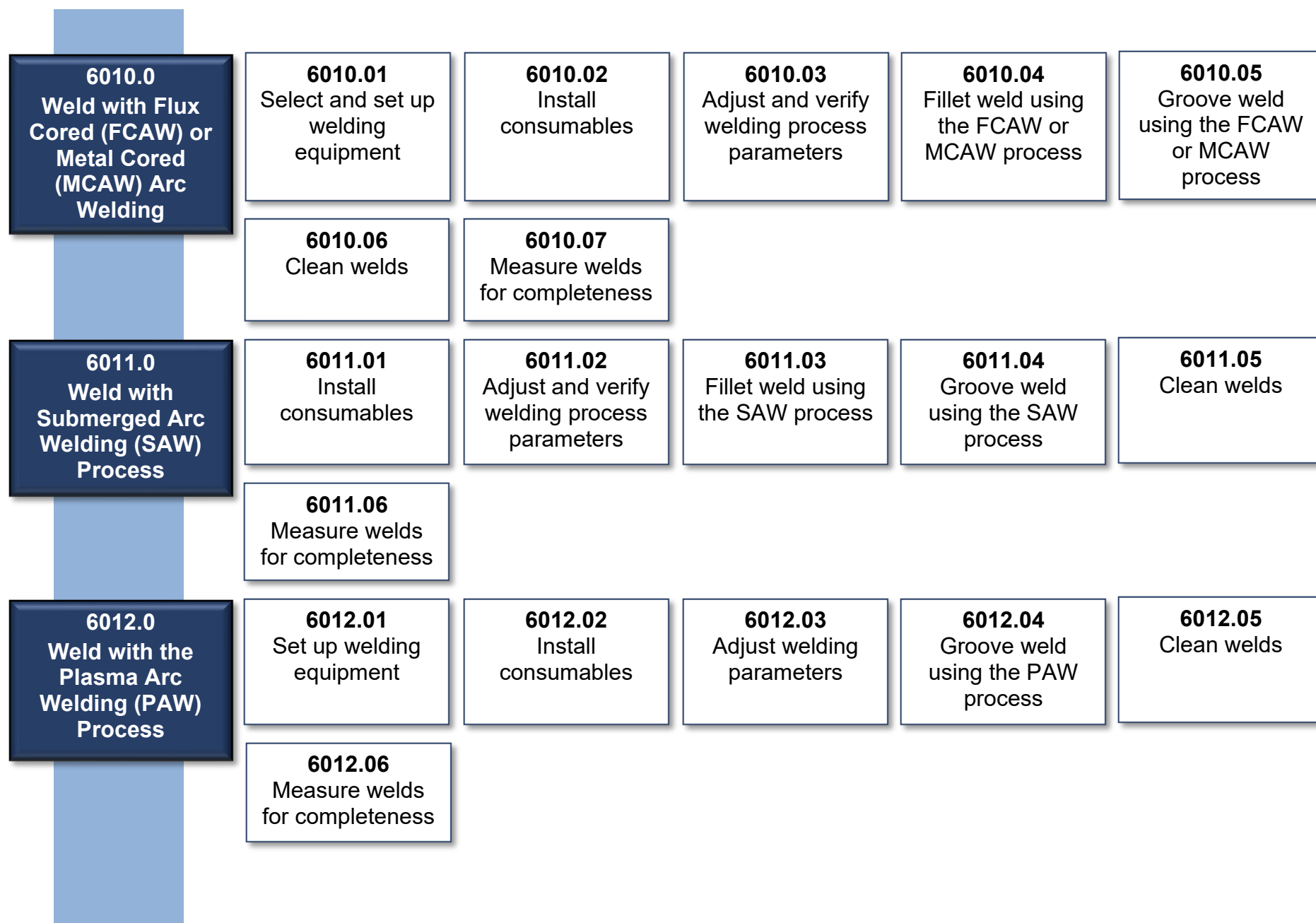
Competency Analysis Profile: Welder 456A *(all unshaded skill sets must be completed)*

6004.0 Lay Out, Cut and Form Metals to Specification	6004.01 Prepare job layout	6004.02 Cut and gouge metal with oxy-fuel equipment	6004.03 Cut metal with arc- air equipment	6004.04 Cut metal with SMAW cutting equipment	6004.05 Cut metal with plasma arc equipment
	6004.06 Cut metal using hand tools	6004.07 Cut metal using power tools	6004.08 Form metal to specified design	6004.09 Prepare welding joints	6004.10 Select material preparation method
6005.0 Fit Sub-Assemblies and Assemblies	6005.01 Make jigs, fixtures and templates with or without actual components	6005.02 Check measurements and fit of components	6005.03 Pre-heat components or assembly	6005.04 Perform tack welding	6005.05 Plan for the control of distortion
	6006.01 Plan sequence of operations	6006.02 Verify fabricated materials and assemblies	6006.03 Prepare job for welding	6006.04 Ensure correct consumables are on hand	6006.05 Check weld joint fit up, tack welds and fixture condition
6006.0 Prepare Assembly for Welding	6006.06 Check that joints to be welded are clean and dry				

Competency Analysis Profile: Welder 456A *(all unshaded skill sets must be completed)*

6007.0 Weld with the Shielded Metal Arc Welding (SMAW) “Stick” Process	6007.01 Select and set up welding equipment	6007.02 Install electrode	6007.03 Adjust and verify welding process parameters	6007.04 Fillet weld using the SMAW “stick” process	6007.05 Groove weld using the SMAW “stick” process
	6007.06 Clean welds	6007.07 Measure welds for completeness			
6008.0 Weld with the Gas Metal Arc Welding (GMAW/MIG) Process	6008.01 Select and set up welding equipment	6008.02 Install consumables	6008.03 Adjust and verify welding process parameters	6008.04 Fillet weld using the GMAW/MIG process	6008.05 Groove weld using the GMAW/MIG process
	6008.06 Clean welds	6008.07 Measure welds for completeness			
6009.0 Weld with the Gas Tungsten Arc Welding (GTAW/TIG) Process	6009.01 Select and set up welding equipment	6009.02 Install consumables	6009.03 Adjust and verify welding process parameters	6009.04 Fillet weld using the GTAW/ TIG process	6009.05 Groove weld using the GTAW/ TIG process
	6009.06 Clean welds	6009.07 Measure welds for completeness			

Competency Analysis Profile: Welder 456A *(all unshaded skill sets must be completed)*



Competency Analysis Profile: Welder 456A *(all unshaded skill sets must be completed)*

6013.0 Braze Metal	6013.01 Select and configure oxy-fuel- gas heating equipment	6013.02 Obtain consumables	6013.03 Braze lap and tee joints	6013.04 Carry out shut down procedure	
6014.0 Weld Studs	6014.01 Select and set up welding equipment	6014.02 Install consumables	6014.03 Weld studs	6014.04 Remove ferrules from welded studs	6014.05 Repair a failed weld
6015.0 Control for Quality While Welding	6015.01 Comply with company quality control standards, customer standards and code requirements	6015.02 Ensure ongoing weld quality	6015.03 Benchmark weld quality		
6016.0 Carry Out Post-Weld Quality Control	6016.01 Visually inspect welds	6016.02 Perform post-weld product control of weldment temperature	6016.03 Correct excessive welding distortion	6016.04 Perform any non-destructive check	6016.05 Prepare weld samples and perform destructive tests
6017.0 Demonstrate Safe Working Practices and Procedures	6017.01 Identify and take corrective action against potential workplace health and safety hazards	6017.02 Handle, store and dispose of hazardous workplace materials	6017.03 Comply with workplace legislation relating to health & safety	6017.04 Wear and maintain personal protective equipment	6017.05 Practice good housekeeping in the workplace

Notes

[illegible]

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



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