

Pre-apprenticeship Training for Roofers

Program Description

The Roofing Human Resources Committee of SMARTHINC¹, with support from Human Resources Development Canada, has created a new, industry based, program of entry-level training for roofers. The program, called “Pre-apprenticeship” training, prepares new workers for apprenticeship as a roofer. There are two levels of training. The first level, orientation, prepares entry-level workers with basic safety and construction practices **before they begin work on a construction site**. This training would be completed in one day.

Following orientation, the worker will complete pre-apprenticeship training of up to thirty additional hours of instruction on the job site. This training teaches general safety and familiarity with the tools and materials of the trade and is delivered on-site with a journey person or experienced roofer acting as a mentor or coach. Employers select one major roofing system as the focus. Time worked, training completed and experience with roofing systems is recorded in the worker’s logbook and signed off by the supervisors and/or journey persons.

After completing orientation, on-site training and one season in the trade, a worker receives a pre-apprenticeship certificate that is recognized by the industry across Canada. In some provinces the worker may qualify for advanced standing in an apprenticeship program. There would be no formal examination. The logbook would serve as proof of hours worked and training on roofing systems.

Objectives

The objective of the pre-apprenticeship program is to prepare new workers for a career in roofing. Training will raise the confidence, improve safety and motivation for starting workers. Employers will benefit from lower turnover, higher productivity and easier recruiting.

Components

There are two training parts – a one-day orientation program and up to thirty hours of technical, on-site training. The full program is completed once the worker logs 800 hours work experience along with the training.

How to Participate

The following groups are invited to collaborate to make this program a success.

- Workers
- Mentors and Trainers
- School Boards, Career Counselors, Parents
- Local Unions and Joint Training Trusts
- Employers
- Provincial Associations
- Provincial Ministries, Apprenticeship Branches and Advisory Committees

Please refer to the information attached and / or call:
John Hill, Canadian Roofing Contractors’ Associations (CRCA)
Bob White, Canadian Council of Sheet Metal Workers & Roofers

1-800-461-2722
1-866-684-7413

Information on Pre-apprenticeship Training for Roofers is also available at:
<http://www.prismeconomics.com/careersinroofing/main.html>

¹ The Sheet Metal and Roofing Training and Human Resources National Committee (SMARTHINC) has nineteen members selected from all provinces and from union and non-union employment. A Roofing Task Committee of 26 specialists designed the pre-apprenticeship program with support from Prism Economics and Analysis.

Pre-apprenticeship Training for Roofers

Guidelines for New Workers

A Career in Roofing

If you want to work out-of-doors with a team of skilled craftspeople – and earn higher wages than most other sectors – consider a career in roofing. Pre-apprenticeship training offers a head start for advancing in the trade. During your first season as a roofer you will learn while you earn. Roofers make higher wages than workers in other service industries like retail trade, food services or office work. Employers in the Canadian Roofing Contractors Association (CRCA) offer excellent full time and seasonal jobs with high wages, good benefits and options for long hours. Over 60 % of their seasonal workers return each year. Entry-level roofers go on to apprentice, receive their certificate of qualification and build a career as a journey-person, supervisor, foreman, estimator, salesperson and owner. CRCA members participate in this pre-apprenticeship program and take pride in their investment in human resources.

Finding a Job – Who to Contact

If you are interested in working as a roofer, call your local Canadian Roofing Contractors Association (CRCA) member association or the Canadian Council of Sheet Metal Workers & Roofer- CCSMW&R (Sheet Metal Workers International Association – SMWIA) contact. Key contacts in your area are listed on the attached contact sheet.

Why Pre-apprenticeship?

The pre-apprenticeship program for roofers gets you started with essential safety instruction and then helps you to understand the tools, materials and systems that you will help install. You will have your own log book that tracks your training and hours and may qualify you for advanced standing in a provincial or territorial apprenticeship training program. The training and experience conform to a national standard set by the CRCA and the CCSMW&R, and the training will be recognized by contractors and employers across Canada.

What to Expect in the Program

Your employer will start you with a one-day orientation session on safety and construction basics that will prepare you for your first work experience. You will be assigned a “mentor / coach” – an experienced roofer who will work with you and make certain that you learn essential skills and understand the basic features of at least one standard roofing system. The program is a commitment by you, your employer, your mentor, the CRCA and the CCSMW&R to the highest standards of craftsmanship. Securing your safety, skills and future in the trade are the ultimate purpose of the program.

For more information on the training and work experience in the pre-apprenticeship program refer to the attached contact list and visit the web sites – there are links to the pre-apprenticeship program.

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Pre-apprenticeship Training for Roofers

Guidelines for Participating Employers

Contractors on the Roofing Task Committee of SMARTHINC¹ and the Canadian Roofing Contractors Association (CRCA) have designed a national pre-apprenticeship program in roofing that is intended to benefit your business and the entire industry. Employers face a shrinking pool of people with the aptitude required to become skilled roofers. It is crucial to recruit, train and retain new entrants in the trade. The pre-apprenticeship program sets out guidelines for training programs and mentoring practices that will help you recruit and retain new workers.

Your local roofing contractor association will provide you with all the information and support you need to get involved. This will include access to groups who are promoting work in roofing and have contacts with young people looking for work.

Why Pre-apprenticeship?

Roofing has traditionally had a high rate of turnover among new workers while facing a high rate of accidents and associated costs. Both these problems are addressed in a new pre-apprenticeship program. The program provides you with training guidelines and help training your supervisory staff in mentoring. Once implemented, the program will help you to recruit, train and retain the workers that you want and need.

The program is designed to attract, then screen new workers so that the best stay in the trade. Many provinces are now requiring the safety training contained in the pre-apprenticeship plan and participating now puts you one step ahead. *This orientation and safety training can be recognized as part of the due diligence that is part of a contractor's responsibility.* It is very likely that the industry as a whole will actually reduce costs with this program as lower turnover will increase productivity and improved safety will reduce costs.

Your provincial contractors association, with support from the CRCA and HRDC can assist you with training materials and classroom training for some of the components.

Pre-apprenticeship has been tried and proven in British Columbia. The program has been reviewed by the best roofing trainers in Canada and reflects their input. Every effort has been made to incorporate the best programs from across Canada. There is no duplication with existing efforts and the program has been tailored to incorporate provincial regulations that apply in your area.

From the start the committee determined that the program would lead to apprenticeship and be:

- Economical and efficient
- Flexible (allowing for instruction in shop, off hours, on site, etc.)
- Responsive to individual's skill and knowledge level
- Recognized by other employers, training institutions

(see over...)

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Contractors, the trade unions and training departments in all provinces have been involved in the design. National recognition allows you to screen out-of-province candidates easily and improves mobility of workers. This will benefit the entire industry.

How to Participate

Each provincial roofing association has reviewed this plan and is ready to help you participate. Participation will require a limited commitment of resources. In particular, supervisors and team leaders in your firm will be called on to provide mentoring or coaching. The success of the program depends on strong mentoring skills. The Roofing Committee recommends that mentors have experience or formal course training of the type provided in "Workplace Coaching Skills". More information is provided in the guidelines for Mentors / Coaches. Provincial roofing contractor associations can provide you will needed training materials including:

- Full background material on the pre-apprenticeship program
- The Canadian Roofing Reference Manual
- A guide to mentoring -- "Workplace Coaching Skills" created by the Open Learning Agency in the Apprenticeship Branch at the B.C. Ministry of Skills, Training and Learning.
- Log books for tracking the progress of the pre-apprentices

Call your provincial Roofing Contractors Association or the Canadian Roofing Contractors' Association at 1-800-461-2722.

Information on Pre-apprenticeship Training for Roofers is also available at:

<http://www.prismeconomics.com/careersinroofing/main.html>

Pre-apprenticeship Training for Roofers

Contact List of Roofing Contractor Associations

British Columbia

Roofing Contractors Association of B.C.
9734-201st Street
Langely, B.C., V1M 3E8
Tel: 604 882-9734 - Fax: 604 882-1744
Web site: www.rcabc.org
Mr. John Finlay

Saskatchewan

Saskatchewan Roofing Contractors Association
1935 Elphinstone Street
Regina, Sask., S4T 3N3
Tel: 306 721-8020 - Fax: 306 565-2840
Ms. Brenda Braaten

Ontario

Ontario Industrial Roofing Contractors Association
940 the East Mall, Suite 301
Etobicoke, Ontario, M9B 6J7
Tel: 888-336-4722 / 416 695-4114 - Fax: 416 695-9920
Web site: www.ontarioroofing.com
e-mail: oirca@ontarioroofing.com
Mr. Don Marks

New Brunswick

New Brunswick Roofing Contractors Association
PO Box 7242, Stn A (7 Market Square)
Saint John, New Brunswick E2L 4S4
Tel: 506 652-7003 - Fax: 506 696-0380
Web site: www.nbrca.ca
Mr. Roly MacIntyre

Alberta

Alberta Roofing Contractors Association
2380 Pegasus Road NE
Calgary, Alberta, T2E 8G8
Tel: 800-382-8515 / 403 250-7055 - Fax: 403 250-1702
e-mail: arca@telusplanet.net
Ms. Brenda Cooley

Manitoba

Roofing Contractors Association of Manitoba
290 Burnell Street
Winnipeg, Man. R3G 2A7
Tel: 204 783-6365 - Fax: 204 783-6446
Mr. R.N. Stefanick (Bob)

Quebec

Association des Maitres Couvreur du Quebec
3001 Boul. Tessier
Laval, Quebec H7S 2M1
Tel: 888-973-2322 - Fax: 450 973-2321
Web site: www.amcq.qc.ca
Ms. Micheline Bonnard

Nova Scotia

Roofing Contractors Association of Nova Scotia
7 Frederick Ave., Box 141
Lakelands Hants County
Nova Scotia, B0N 1Z0
Tel: 888 278-0133 / 902 866-0505 - Fax: 902 866-0506
e-mail: mdw@accesswave.ca
Ms. Marg Woodworth

The Sheet Metal Workers International Union represented by the Canadian Council of Sheet Metal Workers & Roofers is part of the team presenting the Pre-apprenticeship in Roofing Program. Please contact:
Bob White, Canadian Council of Sheet Metal Workers & Roofers 1-866-684-7413

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Pre-apprenticeship Training for Roofers

Guidelines for Mentors and Coaches

The Program

Representatives the Canadian Roofing Contractors Associations (CRCA) and the Canadian Council of Sheet Metal Workers & Roofers (CCSMW&R) at SMARTHINC¹ have developed a national pre-apprenticeship program for roofers. The program is in two parts. First, it describes a one-day orientation program for new workers. Second, it sets out fundamental work experience and skills that a worker should receive during the first season in the trade. Workers in the program will track their training, work experience and hours in a log book and, in some provinces, this may qualify the worker for credit in the early stages of an apprenticeship program.

Why Pre-apprenticeship?

The national pre-apprenticeship program is a common sense approach to introducing new workers to roofing. The program addresses a number of industry issues like the emerging shortage of entry-level workers and competition with other industries and trades for new recruits. Pre-apprenticeship will become a widely regarded symbol of the investment that employers are making in workers and the opportunities for a career in roofing.

At its core, however, the program describes a process of orientation and coaching that is natural to most employers and their supervisors. Contractors and workers designed the program with the idea that most learning takes place on the job. It is also true that crucial habits are learned in the first weeks and months of work.

This is the day-to-day reality in the trade. As supervisors, team leaders and journey persons, you are regularly expected to oversee the work of junior and younger workers. The pre-apprenticeship part of the program simply tracks the steps that are normally part of this process. Keeping records helps workers to track their progress and helps employers recognize emerging skills and attitudes.

Being a Mentor / Trainer

Keeping a logbook that records the workers' progress is a central point of the program. Supervisors, team leaders or journey-persons will be called on to record the progress of participating workers. Each of these leaders will already have a style and manner for coaching. The program sets these practices down for the record, referring employers and coaches to many tried and true systems.

(see over...)

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As a coach working with the pre-apprentices in the system, it is expected that you will have had experience training young workers. Your coaching should include the basic elements set out in the attached "Guidelines for Workplace Coaching Skills". If you are asked to coach a member of the pre-apprenticeship program you should consult this document. If the practices noted there are not familiar to you, you are referred to the many courses on coaching and mentoring that are offered across Canada. Some of these are listed in the paper "Guidelines for Workplace Coaching Skills". It is a responsibility of journeypersons to teach new roofers the skills of the trade.

Rewards

Coaching a new roofer in safety and basic work skills is truly a "win-win" situation. Properly trained entrants add to productivity, know when to get out of the way and avoid accidents. Other team members can rely on the new member to help when needed and make the work go more quickly. Employers move closer to a systematic pattern of human resource management that reduces turnover, increases safety and raises productivity.

For further information, please call:

John Hill, Canadian Roofing Contractors' Association (CRCA)
Bob White, Canadian Council of Sheet Metal Workers & Roofers

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Pre-apprenticeship Training for Roofers

A Guideline for Workplace Coaching Skills

The basics of on-the-job coaching are set out in many different “train the trainer” type programs. An excellent example is “Workplace Coaching Skills” created by the Open Learning Agency in the Apprenticeship Branch at the B.C. Ministry of Skills, Training and Learning. This program has been adopted in Alberta and several equivalent programs are available in other provinces. SMARTHINC has adopted the “Workplace Coaching Skills” as a guideline for the Roofing Pre-apprenticeship program.

A summary of the main points is presented here. If employers and their supervisors or team leaders wish to upgrade coaching skills in their work environment, this program can be made available to you. There are six self-taught modules and a video. It is recommended that each module would take three hours.

“Workplace Coaching Skills” breaks the essentials of on-the-job training into the following six modules and sub-components.¹

1. *Identifying the Point of the Lesson*

Your role as a coach, the importance of learning objectives and the steps in coaching process.

The role of the Coach:

- The skill expert
- The learning guide

The six steps to learning:

- Identify the key point of the lesson
- Link the lesson
- Demonstrate the skill
- Provide practice
- Give feedback
- Assess the learner’s progress

2. *Linking the Lessons*

What a learner needs from you, building the learners’ skills in a particular order, setting the pace for learning, and picking the right moment for a coaching session.

What Learners Need:

- To see the value and the point of a lesson
- To understand
- To see and try
- Practice
- Feedback
- A sense of progress

Lesson Order:

- From simple to complex skills
- From the start to the finish of a task or job
- Building towards the learner’s main interest
- Choosing the lesson order

(see over...)

¹ This material is taken from “Workplace Coaching Skills – Participants Manual” by Open Learning Agency, Apprenticeship Branch, Ministry of Skills, Training and Labour, Government of British Columbia.

Focusing on the Learner's Style:

- Visual
- Auditory
- Physical

Coaching Moments

3. *Demonstrating a Skill*

Starting a lesson, explaining and demonstrating a skill, and getting the learner involved.

Demonstration

- Explaining the context
- Active demonstration

Hands on trial

Recapping

4. *Practicing a Skill*

Planning and guiding practice opportunities for the learner and giving the learner hands-on experience with a skill.

Setting up for practice

Types of practice

- Guided practice
- Limited practice
- Independent practice

Recycling

5. *Giving Feedback to the Learner*

Describing the learner's behaviour to correct mistakes and reward accomplishments.

Value of feedback

Types of feedback

- Supportive feedback
- Corrective feedback

Feedback guidelines

6. *Assessing the Learner's Progress*

Setting up challenges to determine skill levels and progress, and to plan further learning.

The value of assessing

Assessing skill level

Planning next steps

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Pre-apprenticeship Training For Roofers

Background Briefing for School Boards and Career Counselors

Roofing contractors are a traditional first employer for many young Canadians. Roofing work pays well, requires physical strength and is an opportunity for summer work as well as a long term career. Young people are naturally attracted to this opportunity to work out-of-doors and earn extra income.

The roofing industry has been increasing its investment in workers as the complexity of roofing systems increases and more skill is needed. Attracting and retaining the best qualified and motivated people is a priority.

A national committee of employers and labour representatives has designed a new roofing pre-apprenticeship program to answer many labour market challenges. The industry is seeking the support of the school systems and career counselors in attracting young people into the program.

The program has three immediate objectives. First, it makes the young worker aware of roofing as a career. Participants are encouraged to understand how roofing systems work and how they contribute to the overall construction process. They join a team of craftspeople who have a tradition of pride in their work. Mentor / coaches are assigned to each pre-apprentice to provide close supervision and "hands on" training.

Second, the program emphasizes safety. Orientation programs teach the basics before the workers actually go on the construction site. Safety training continues during the workers first season on the job. Employers understand that this is a priority and reflects growing attention to safety by provincial regulators.

Third, the program targets increasing the number of apprentices and certified roofers in the work force.

Why Pre-apprenticeship?

The roofing industry believes that increased apprenticeship registration and more certified workers are essential to meeting labour market issues. Young workers are encouraged from the start to seek the highest qualifications and work standards. The pre-apprenticeship qualifications will help workers find new jobs in the industry and move across provinces. Work experience and training may be recognized and credited to the requirements of first year in the apprenticeship program.

Young roofers have the option of moving on to apprenticeship and journey person status. Within five years of starting, workers are often earning more than some university graduates. Because workers earn regular wages while they learn the trade, most are free of debt as they start their careers. Many roofing contractors employ their teams all year. Where work is seasonal, many roofers gain additional qualifications or earn extra income during the winter.

Entry-level roofers can work on industrial and commercial projects as well as residential shingling. Many go on to apprentice, receive their certificate of qualification and build a career as a journey-person, supervisor, foreman, estimator, salesperson and owner. CRCA members participate in this pre-apprenticeship program and take pride in their investment in human resources.

The industry needs the assistance of teachers and career counselors to identify young people with the necessary qualifications and aptitudes. Pre-apprenticeship offers valuable supervision, recognition and attention to safety. Please contact your local Roofing Contractors Association or SMWIA local to help us start young people in a promising career.

For details see the attached contact list or visit: <http://www.prismeconomics.com/careersinroofing/main.html>

Pre-apprenticeship Training for Roofers

Background Briefing for Provincial Associations

Contractors on the Roofing Task Committee of SMARTHINC¹ and the Canadian Roofing Contractors Association CRCA have developed a pre-apprenticeship program that will deliver benefits to your members and the entire industry. Employers face a shrinking pool of people with the aptitude required to become skilled roofers. It is crucial to recruit, train and retain young people in the trade. The pre-apprenticeship program sets out guidelines for training programs and mentoring practices that will help your members recruit and retain new workers.

CRCA invites all Provincial Associations to promote the pre-apprenticeship plan and offer support to participating members. This program will help your members to:

- Recruit and screen new employers
- Reduce turnover
- Retain strong performers
- Improve safety records and reduce costs
- Improve productivity and job quality
- Meet Provincial safety requirements

There are even larger benefits for the entire industry. The program is intended to:

- Improve mobility of workers among provinces
- Keep new and experienced roofers in the industry
- Raise the profile and credibility of the industry with Provincial Ministries
- Promote apprenticeship and certification
- Raise the skill levels and quality of work in the industry

With support from HRDC, the CRCA is able to supply you and your contractors with training guidelines, instruction materials for mentors/coaches, logbooks, the Canadian Roofing Reference Manual and promotional material.

Why Pre-apprenticeship?

Pre-apprenticeship has been tried and proven in British Columbia. The program has been reviewed by the best roofing trainers in Canada and reflects their input. Every effort has been made to incorporate the best parts of these and other programs. There is no duplication with existing efforts and the program has been tailored to incorporate provincial regulations that apply in your area.

From the start the committee determined that the program would lead to apprenticeship and be:

- Economical and efficient
- Flexible (allowing for instruction in shop, off hours, on site, etc.)
- Responsive to individual's skill and knowledge level
- Recognized by other employers, training institutions

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Contractors, the trade unions and training departments in all provinces have been involved in the design. National recognition allows you to screen out-of-province candidates easily and improves mobility of workers. This will benefit the entire industry.

What's in it for the Industry?

Roofing has traditionally had a high rate of turnover among new workers while facing a high rate of accidents and associated WCB costs. Both these problems are addressed in a new pre-apprenticeship program. The program provides you with training guidelines and help train your supervisory staff in mentoring. Once implemented, the program will help you to recruit, train and retain the workers that you want and need.

The program is designed to attract, then screen new workers so that the best stay in the trade. Many provinces are now requiring the safety training contained in the pre-apprenticeship plan and participating now puts you one step ahead. *This orientation and safety training can be recognized as part of the due diligence that is part of a contractor's responsibility.* It is very likely that the industry as a whole will actually reduce costs with this program as lower turnover will increase productivity and improved safety will reduce costs.

What's in it for the Association?

Your association gains access to new services for members without any additional costs. The program has the support of the Directors of Apprenticeship in your province. Training guidelines are consistent with local regulation and avoid any duplication by drawing on the ideas and programs already in place in each province.

There will be no duplication of effort and no competition for resources related to the national pre-apprenticeship program. The CRCA is intent on complementing local activity and adding value.

Questions and Concerns

Contractors may be concerned that participation by their workers may increase the likelihood that they will move to other contractors.

This risk will be more than offset by increased retention and the added attractiveness of employment in participating firms.

Contractors may be concerned that they are being asked to take on the cost of training that should be part of first year apprenticeship.

The pre-apprenticeship program is carefully designed to support, not replace apprenticeship. Training is introductory and will not duplicate apprenticeship. Rather, the program is deliberately intended to encourage new roofers to stay in the trade and go on to apprenticeship.

For further information, please call:

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Pre-apprenticeship Training for Roofers

Background Briefing for Union Locals and Joint Training Trusts

The Building Trades and the Sheet Metal Workers International Association (SMWIA), represented by Canadian Council of Sheet Metal Workers & Roofers (CCSMW&R), have a reputation for quality work and pride in their traditions. There is a new plan to encourage new entrants to join this tradition. CCSMW&R leaders, in cooperation with contractors, have designed a pre-apprenticeship program for new entrants. This plan is part of a longer-term strategy to build the depth and breadth of the skilled roofing workforce.

The market is strong and new work opportunities will bring recruits into the trade. Pre-apprenticeship through the SMWIA (CCSMW&R) and its contractors will add to your membership and build a larger share of the market for union contractors. The program targets improved safety and higher productivity that benefit your employers. It also targets secure and long term roofing teams where all members contribute and enjoy the work.

Why Pre-apprenticeship?

Training and certification are core values for the Building Trades and their employers. Commitment to training programs has sustained leadership in construction. New technology and market pressures are leading some governments to consider lower levels or relaxed standards of certification. These changes are not welcome in roofing where new systems and safety concerns underline the need for more, not less, training. The pre-apprenticeship program is designed to enhance apprenticeship and build a future with more certified roofers.

Pre-apprenticeship has been tried and proven in British Columbia. This program has been reviewed by CCSMR&R leaders and the best union roofing trainers in Canada and reflects their input. Every effort has been made to incorporate the best programs from across Canada. There is no duplication with existing efforts and the program has been tailored to incorporate provincial regulations that apply in your area.

Pre-apprenticeship will encourage new roofers to join the union and build a career in roofing. It is the first step in a long-term plan to build the ranks of unionized roofers through apprenticeship. The trades are the founders of Canada's construction apprenticeship programs. This program will coincide with national and provincial campaigns to promote careers in the trades as well as bigger and better apprenticeship programs.

What's in it for SMWIA Members?

The market for roofing is growing and your union will grow along with it. New entry-level members will replace temporary and unskilled helpers who had no allegiance to the union and your employers. A focus on safety will improve your work experience.

Frequently Asked Questions

Members may be concerned that new members will reduce their hours.

The pre-apprenticeship plan is part of a larger strategy based on expected growth in the market and replacement needs as older members retire. Union leaders will monitor the available work to make sure that new entrants have secure work at no cost to the existing membership.

(see over...)

Members are reluctant to take on added responsibilities for training.

There will be very limited need for additional supervision. The pre-apprenticeship program will teach new workers safety and other skills that are already required by provincial regulations. Obligations imposed by the Provinces are being replaced by opportunities to build the unionized workforce.

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1-800-461-2722

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Pre-apprenticeship Training for Roofers

Background Briefing for Provincial Ministries and Advisory Boards

The Roofing Task Committee of SMARTHINC¹ is proposing a new Pan Canadian roofing pre-apprenticeship. This program is designed to reduce worker turnover and improve safety in the trade. In the view of the committee, increasing apprenticeship registrations and worker certification is the best way to deal with labour market issues.

Members of SMARTHINC were carefully selected to represent all provinces, advisory committees and industry groups. Union and non-union contractors participated in the work of the committee. The Directors of Apprenticeship, through the Industry Relations Committee of the CCDA, were continually monitoring the deliberations and have indicated their support.

The committee has carefully reviewed existing systems and avoided any duplication of work. Experienced trainers from several provinces have reviewed the plans and their input is reflected in the final proposal. Each stage of the training process has room for instruction in safety regulations and procedures that are specific to your province.

Why Pre-apprenticeship?

Strong markets and shifting demographics will increase the demand for new roofers. The industry must compete with other employers to attract young people with needed skills and aptitudes. The pre-apprenticeship program is designed to promote careers in roofing and to attract and retain new entrants in a safe and promising work environment.

The proposed training is designed to complement existing apprenticeship training. Provincial authorities will be encouraged to review the plans and grant, where appropriate, credit for prior learning or work experience for workers entering apprenticeship. Workers will be encouraged by the program to consider apprenticeship as a future option.

Employers and their associations understand that many provinces are introducing new health and safety regulations that will require orientation training included in the new program. In this sense, the proposal is simply a more efficient and convenient way to adapt to new standards of safety.

One objective of the program is to increase the mobility of the workforce among employers and across provinces. As roofers progress through the program they will join a growing national workforce of skilled workers. Employers will recognize the program as a strong qualification in recruiting. The proposed system will facilitate movement from province to province and workers will be confident that their work and training will be recognized by employers and trainers.

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Information on Pre-apprenticeship Training for Roofers is also available at:

<http://www.prismeconomics.com/careersinroofing/main.html>

¹ The Sheet Metal and Roofing Training and Human Resources National Committee (SMARTHINC) has nineteen members selected from all provinces and from union and non-union employment. A Roofing Task Committee of 26 specialists designed the pre-apprenticeship program with support from Prism Economics and Analysis.

Pre-apprenticeship Training for Roofers

Detailed Outline of Training – Overview/Orientation Program

This outline sets out the proposed content for roofing pre-apprenticeship training programs. Topics and coverage reported here are suggested as the basis for two separate training processes, the orientation program and the pre-apprenticeship program.

The orientation program is intended to be a one-day, classroom type training experience. Material could be offered on the employers premise by staff, in a training facility at a local contractor association, union training center, construction safety association or other location. Alternatively the orientation could be offered on a CD Rom or Internet site. In the latter case the program would need to have an assessment process where workers would answer basic questions to confirm that they have read and understood the material.

The pre-apprenticeship program is intended to be a series of on-the-job coaching sessions where a supervisor, journey-person or team leader instructs the new recruit on the basics of safety and roofing systems. This training would focus on one of six roofing systems:

1. Built-up roofing membrane
2. Hot rubberized roofing system
3. Cold process roofing
4. Modified bitumen membrane – 2 ply and torch-on
5. Single ply – thermoset and thermoplastic
6. Steep roofing – shingles, shakes and tile

This outline proposes the topics and coverage for orientation and on-the-job instruction in the six roofing systems. Detailed references point the reader to a more complete discussion of each topic in the Canadian Roofing Reference Manual. The Reference Manual is intended as a supplement to this outline and employers, trainers and others are encouraged to review details there.

Orientation Program

The orientation program is designed for delivery before workers begin work on a construction site. The session is designed for one day – up to eight hours and it would be delivered in a classroom environment on the employers' premises, at a local association or union training facility. The following guidelines are proposed for this session. Detailed material needed to actually deliver the program is available in the Canadian Roofing Reference Manual and the appropriate references are noted below.

The purpose of the orientation session is to make the new worker aware of the basic safety concerns, essential protective equipment and working conditions and to alert them to the need for further information. A primary objective of the session is to prepare the worker for their experience as they start on the job. Orientation will not teach the worker actual working skills.

This means, for example, that the general safety section described below does not need to teach kettle operations at the level of details found in the Roofing Reference Manual (see Ch. 1a). These guidelines suggest only that the new worker be made aware of the kettles, bitumen and asphalt and their role in roofing and the potential hazards that they represent.

(see over...)

<u>Outline</u>	<u>Approx. Time</u>
Introduction	0.5
Objectives of the session	
Description of the company and jobs	
Careers in roofing and opportunities for apprenticeship training	
General Safety	3.0
Work site protection, house keeping, material and site protection	
Fall protection, barricades and guardrails	
Equipment safety (electrical)	
Handling hazardous materials	
Personal protection	
Safe lifting	
Loading, moving, storing and lifting equipment and supplies	
<see Roofing Reference Manual Chapter 1a>	
Fire Safety	1.0
Propane and kerosene use	
Extinguishers	
Fire prevention	
<see Roofing Reference Manual Chapter 1b,c>	
Ladder Safety	1.0
Ladder types	
Setting up and taking down	
Erecting scaffolds and staging	
Lifelines and safety belts	
<see Roofing Reference Manual Chapter 1e>	
Provincial Health and Safety Regulations	1.5
Purpose of the Regulations	
Employer and worker responsibilities	
General requirements – fall protection, hazardous materials	
<material presented here will be specific to each province and emphasize mandatory obligations under local law>	
WHMIS	1.0
Introduction	
Hazardous substances and labels	
Material Safety Data Sheets	
<see Roofing Reference Manual Chapter 1f>	
First Aid (Optional)	
Workers should be introduced to training sessions in basic first aid and CPR.	

Pre-apprenticeship Training for Roofers

Detailed Outline of Training – Pre-Apprenticeship Program

Pre-apprenticeship Training

Following orientation, the worker will complete pre-apprenticeship training that would take up to four additional days. This training would target general safety and familiarity with the tools and materials of the trade. The training would be delivered on-site through a journey person or supervisor acting as a mentor or coach. Employers and the new roofer would have the option of selecting one of the five major systems noted above as the focus for this training. The following outline describes the instruction to be given to a new roofer by a trainer (supervisor, team leader or journeyperson) during the first season (800 to 900 hours) of work. ¹

The following guidelines for on-the-job training are divided into two categories – site specific training that applies to all roofing systems and on-going training that would be associated with work on one specific system. Topics listed here are intended to guide supervisors and coaches on the information that should be shared with the worker over the course of the first season on the job.

This training is not a substitute for apprenticeship. Workers are not expected to develop skills or competence in these areas. Pre-apprentice instruction is only meant to introduce the worker to the equipment, material, processes and systems so that they will understand their use and be able to assist other team members in their use. Time allocations are short, and the coach / mentor is not expected to provide demonstrations or have the worker learn how to use all these materials. There is no expectation that the learner will achieve competency in the skills and work practices involved. The training will familiarize the worker with technical details so that they better understand the work and are able to respond to requests and instructions.

Several sections of the Roofing Reference Manual contain much more details than is required for pre-apprentices. For example the section on engines and motors in Chapter 2b should be omitted. At the same time certain themes – especially related to safety – warrant additional attention. Crucial instruction on general site housekeeping is first introduced in the orientation under general safety and appears again here, in more detail, under general housekeeping.

(see over...)

¹ It is recommended that the trainer receive instruction in on-the-job coaching that meets the standards set in the "Workplace Coaching Skills" created by the Open Learning Agency in the Apprenticeship Branch at the B.C. Ministry of Skills, Training and Learning. Please refer to the guidelines for Mentors and Trainers.

<u>Topic</u>	<u>Approx. Time</u>
Site Specific Training	10.0
Roofing Tools and Equipment	2.0
Protective equipment	
Hand tools	
Basic roofing tools	
Roofing equipment	
Mechanical fasteners	
<See Roofing Reference Manual Chapter 2a, b, d>	
Loading and Unloading Trucks, Placing Materials	2.5
Hoisting equipment	
Rigging	
<See Roofing Reference Manual Chapter 1 d, 2 c>	
General Housekeeping	1.5
<See Roofing Reference Manual Chapter 1a>	
Preparing the Deck	2.0
Cleaning debris	
Placing materials	
Hazardous (hot) materials	
Roofing removal	
Chutes, hoisting, cleanup	
Barricades, guardrails	
<See Roofing Reference Manual Chapter 3a>	
Winter Precautions	0.5
<See Roofing Reference Manual Chapter 3a, b>	
Job Close Down	1.5
Cleanup	

Pre-apprenticeship Training for Roofers

Detailed Outline of Training – Built-Up Roofing

Ongoing Training: Built-Up Roofing

	<u>Time</u>	<u>Roofing Ref. Manual</u>
1) General Overview	0.5 hr	4a
a. What is built-up roofing (BUR)		
i. Roof system types (inverted, conventional)		(297-299, 317-321)
ii. Identify materials		(298-299, 304)
b. Weather limitations		(297)
c. 4 major steps for installation		(297, 300, 304)
2) Identify Tools and Equipment	3 hr	2a, 1a, 2c
a. Protective equipment		(139, 4-5)
b. Hand tools & safe practices		(139-158)
c. Kettles & hot carriers		(17-28, 49-62)
i. Handling hot bitumen		(28-31, 158-161)
d. Mechanical equipment		(14-16, 163-173)
e. Hoists		(191-205)
3) Prepare the Work Site	2 hr	1a
a. Moving equipment and supplies		(6-7)
i. Handling materials and load trucks		(38-44)
ii. Loading the roof		(44-45)
4) Preparing the Deck	4 hr	3a, 3b
a. Deck type (wood, steel etc.)		(229-233)
b. Cleaning deck		(233-237, 286-291)
- removing ice, snow, water (hazards)		
- removing debris		
c. Curbs, cants, joints		(258-261)
d. Separation sheets, vapour retarders		(240-241, 265-273)
5) Apply BUR	5 hr	1a, 3a, 4a
a. Draw vapour retarder, separation sheet		
i. Materials		(265-273)
b. Identify insulation materials		(272-279, 320)
i. Draw and place insulation		
ii. Protect (cover insulation)		(44-45)
iii. Gather & dispose of scrap		
c. Apply membrane materials		(300-307, 317-318)
i. Draw membrane materials		
ii. Protect membrane materials		
iii. Clean & dispose of scrap		
d. Apply surfacing		(315-317, 319-322)
i. Draw surfacing materials		
ii. Place surfacing materials		

(see over...)

	<u>Time</u>	<u>Roofing Ref. Manual</u>
6) Project Closedown	1 hr	1a, 1e
a. Remove materials from roof		
i. Load materials on trucks or stockpile		(35-34, 1-4)
b. Remove debris, scrap		
c. Remove equipment		
i. Load onto trucks		
d. Clean stains, spills etc.		
e. Remove protective equipment (ladders etc.)		(101)
Total	15.5 hr	

Pre-apprenticeship Training for Roofers

Detailed Outline of Training – Modified Bitumen Membrane Roofing

Modified Bitumen Membrane Roofing

	<u>Time</u>	<u>Ref. Manual</u>
1) General Overview	0.5 hr	5 (345-346, 317-321)
a. What is modified bitumen roofing (MBM)		
i. Roof system types (inverted, conventional)		
ii. Identify materials		
b. Weather limitations		(360,378)
c. Major steps for installation		(357-358)
2) Identify Tools and Equipment	3 hr	5, 2a, 1a (346-356)
a. Protective equipment, safety precautions		(139-158)
b. Hand tools & safe practices		(17-28, 49-62)
c. Kettles & hot carriers		(356, 377-378)
i. Torches		(28-31, 158-161)
ii. Handling hot bitumen		(49-57, 14-16)
d. Mechanical equipment		(170-175, 191-205)
e. Hoists		
3) Prepare the Work Site	2 hr	1a (6-7)
4) Moving Equipment and Supplies		(38-44)
a. Handling materials and load trucks		(44-45)
b. Loading the roof		
5) Preparing the Deck	4 hr	5, 3a, 3b (229-233)
a. Deck type (wood, steel, etc)		(233-237, 286-291)
b. Cleaning deck		
- removing ice, snow, water (hazards) – removing debris		
c. Curbs, cants, joints		(258-261)
d. Separation sheets, vapour retarders		(240-241, 265-273)
e. Priming deck		(359-360)
6) Apply MBM	5 hr	1a, 3a, 4a, 5 (265-273)
a. Draw vapour retarder, separation sheet		(272-279, 320)
i. Materials		
b. Identify insulation materials		
i. Draw and place insulation		
ii. Protect (cover insulation)		(44-45)
iii. Gather & dispose of scrap		
c. Apply membrane materials		(357-358, 317-318)
i. Draw membrane materials		
ii. Protect membrane materials		(377-381)
iii. Clean & dispose of scrap		

(see over...)

	<u>Time</u>	<u>Ref. Manual</u>
7) Project Close Down	1 hr	1a, 1e
a. Remove materials from roof		
i. Load materials on trucks or stockpile		(35-45, 1-4)
b. Remove debris, scrap		
c. Remove equipment		
d. Clean stains, spills, etc.		
e. Remove protective equipment (ladders, etc.)		(101)
Total	15.5 hr	

Pre-apprenticeship Training for Roofers

Detailed Outline of Training – Single Ply Thermoplastic Roofing

Single Ply Thermoplastic Roofing

	<u>Time</u>	<u>Ref. Manual</u>
1) General Overview		6, 6a
a. What is single ply (TP) roofing	0.5 hr	(383)
i. Roof system types (looselaid, mech. fast., full adh.)		(387-389)
ii. Identify materials		(385-386)
b. Major steps for installation		(357-358)
2) Identify Tools and Equipment	3 hr	6, 2a, 1a
a. Protective equipment, safety precautions		(139, 4, 5)
b. Hand tools & safe practices		(386, 139-157)
c. Hoists		(191-205)
3) Prepare the Work Site	2 hr	1a
a. Moving equipment and supplies		(6-7)
i. Handling materials and load trucks		(38-44)
ii. Loading the roof		(44-45)
4) Preparing the Deck	4 hr	5, 3a, 3b
a. Deck type (wood, steel, etc)		(229-233), (389)
b. Cleaning deck		(233-237, 286-291)
- removing ice, snow, water (hazards) – removing debris		
5) Apply Thermoplastic Membrane	5 hr	6a
a. Identify insulation materials		(272-279, 320)
i. Draw and place insulation		
ii. Protect (cover insulation)		(44-45)
iii. Gather & dispose of scrap		
b. Apply Membrane materials		(390-392)
- Mechanically fastened, full. Adhered, Looselaid		(393-394)
c. Seams & welds		(412)
d. Protected membrane		
6) Edges and Flashings		(395-397)
7) PVC Application Tips - Do's and Don'ts		(413-414)
8) Project Close Down	1 hr	1a, 1e
a. Remove materials from roof		
- Load materials on trucks or stockpile		(35-45, 1-4)
b. Remove debris, scrap		
c. Remove equipment		
d. Load onto trucks		
e. Clean stains, spills, etc.		
f. Remove protective equipment (ladders, etc.)		(101)
Total	15.5 hr	

Pre-apprenticeship Training for Roofers

Detailed Outline of Training – Single Ply Thermoset Roofing

Single Ply Thermoset Roofing

	<u>Time</u>	<u>Ref. Manual</u>
1) General Overview		6, 6b
a. What is single ply (EPDM) roofing	0.5 hr	(415)
i. Roof system types (looselaid, mech. fast., full adh.)		(417-420)
ii. Identify materials		(416, 426, 433-436)
b. Major steps for installation		(420-427)
2) Identify Tools and Equipment	3 hr	6, 2a, 1a
a. Protective equipment, safety precautions		(139, 4, 5)
b. Hand tools & safe practices		(416-418), (139-157)
c. Hoists		(191-205)
3) Prepare the Work Site	2 hr	1a
a. Moving equipment and supplies		(6-7)
i. Handling materials and load trucks		(38-44)
ii. Loading the roof		(44-45)
4) Preparing the Deck	4 hr	6b, 3a, 3b
a. Deck type (wood, steel, etc)		(229-233), (420)
b. Cleaning deck		(233-237, 286-291)
- removing ice, snow, water (hazards) – removing debris		
5) Apply EPDM Membrane	5 hr	6b
a. Identify insulation materials		(272-279, 320)
i. Draw and place insulation		
ii. Protect (cover insulation)		(44-45)
iii. Gather & dispose of scrap		
b. Apply membrane materials		
- Mechanically fastened, full. Adhered, Looselaid		(420-427)
c. Seams		(427-431)
6) Edges, Flashings & Joints		(431-438)
7) EPDM Application Tips - Do's and Don'ts		(450-452)
8) Project Close Down	1 hr	1a, 1e
a. Remove materials from roof		
Load materials on trucks or stockpile		(35-45, 1-4)
b. Remove debris, scrap		
c. Remove equipment		
d. Load onto trucks		
e. Clean stains, spills, etc.		
f. Remove protective equipment (ladders, etc.)		(101)
Total	15.5 hr	

Pre-apprenticeship Training for Roofers

Detailed Outline of Training – Hot Rubberized Roofing

Hot Rubberized (HR) Roofing

	<u>Time</u>	<u>Ref. Manual</u>
1) General Overview	0.5 hr	4b
a. What is hot rubberized (HR) roofing		(297-299,317-321)
i. Roof system types (inverted)		(298-299, 304,330)
ii. Identify materials		(330-332, 335)
b. Major steps for installation		(330-336)
2) Identify Tools and Equipment	3 hr	2a, 1a, 2c, 4b
a. Protective equipment		(139, 4-5)
b. Hand tools & safe practices		(139-158)
c. Kettles & Hot carriers		(17-28, 158-161)
i. Handling hot bitumen		(28-31, 49-62)
d. Mechanical equipment		(14-16, 163-173)
e. Hoists		(191-205)
3) Prepare the Work Site	2 hr	1a
a. Moving equipment and supplies		(6-7)
i. Handling materials and load trucks		(38-44)
ii. Loading the roof		(44-45)
4) Preparing the Deck	4 hr	3a, 3b
a. Deck type (concrete)		(230-231)
b. Cleaning deck		(233-237, 286-291)
- removing ice, snow, water (hazards) - removing debris		
c. Priming deck		(331)
5) Apply HR	5 hr	1a, 3a, 4a
a. Draw and apply hot rubber		(330-333)
b. Identify insulation materials		(272-279, 320)
i. Draw and place insulation		(330, 335)
ii. Protect (cover insulation)		(44-45)
iii. Gather & dispose of scrap		
c. Apply Membrane materials		(300-307, 317-318)
i. Draw membrane materials		
ii. Protect membrane materials		
iii. Clean & dispose of scrap		
d. Roof edges & joints		(333-334)
e. Apply surfacing		(335, 336)
i. Draw surfacing materials		
ii. Place surfacing materials		

(see over...)

	<u><i>Time</i></u>	<u><i>Ref. Manual</i></u>
6) Project Closedown	1 hr	1a, 1e
a. Remove materials from roof Load materials on trucks or stockpile		(35-45, 1-4)
b. Remove debris, scrap		
c. Remove equipment		
d. Clean stains, spills etc.		
e. Remove protective equipment (ladders etc.).		(101)
<i>Total</i>	15.5 hr	

Pre-apprenticeship Training for Roofers

Detailed Outline of Training – Cold Process Roofing

Cold Process Roofing

	<u>Time</u>	<u>Ref. Manual</u>
1) General Overview	0.5 hr	4c
a. What is modified cold process roofing		
i. Roof system types (inverted, conventional)		(339, 343-344)
ii. Identify materials		
b. Major steps for installation		(339-342)
2) Identify Tools and Equipment	3 hr	2a, 1a
a. Protective equipment, safety precautions		(346-356)
b. Hand tools & safe practices		(139-158)
c. Hoists		(170-175) (191-205)
3) Prepare the Work Site	2 hr	1a
4) Moving Equipment and Supplies		(6-7)
a. Handling materials and load trucks		(38-44)
b. Loading the roof		(44-45)
5) Preparing the Deck	4 hr	3a, 3b, 4b
a. Deck type (wood, steel etc.)		(229-233)
b. Cleaning deck		(233-237, 286-291)
- removing ice, snow, water (hazards) - removing debris		
c. Curbs, cants, joints		(258-261)
d. Separation sheets, vapour retarders		(240-241, 339-340)
e. Priming deck		(331)
6) Apply cold process roofing	5 hr	1a, 3a, 4c
a. Draw vapour retarder, separation sheet		
Materials		(265-273, 339-340)
b. Identify insulation materials		(272-279, 320)
i. Draw and place insulation		
ii. Protect (cover insulation)		(44-45)
iii. Gather & dispose of scrap		
c. Apply Membrane materials		(340-343)
i. Draw membrane materials		
ii. Protect membrane materials		
iii. Clean & dispose of scrap		
d. Apply surfacing		(343-344)
7) Project Closedown	1 hr	1a, 1e
a. Remove materials from roof		
Load materials on trucks or stockpile		(35-45, 1-4)
b. Remove debris, scrap		
c. Remove equipment		
d. Clean stains, spills etc.		
e. Remove protective equipment (ladders etc.).		(101)
Total	15.5 hr	

Pre-apprenticeship Training for Roofers

Detailed Outline of Training – Steep Roofing

Steep Roofing

	<u>Time</u>	<u>Ref. Manual</u>
1) General Overview	1 hr	7
a. What is steep roofing		
i. Roof system types (asphalt, wood, tiles)		(445-466, 473-474)
ii. Identify materials		
2) Identify Tools and equipment	3 hr	2a, 1a, 1e
a. Protective equipment, safety precautions		(99-102, 139, 4-5)
b. Hand tools & safe practices		(139-158, 509-510)
c. Hoists		(204-207)
d. Fall protection, lifelines		(111-113)
3) Moving equipment and supplies		(6-7)
a. Handling materials and load trucks		(42-44)
b. Loading the roof		(46-48)
4) Asphalt Shingles	3 hr	7a
a. Standard Shingles		
i. Beginning the roof (eave protection, underlay)		(485-487)
ii. Applying new roof		(486-496)
iii. Overlaying		(496-499)
b. T-Lock shingles		(500-503)
c. Lo-Slope Shingles		(504-507)
5) Wood Shingles	3 hr	7, 7b
a. Materials		(509, 458-456)
b. Prepare deck		(512-513)
c. Install shingles, shakes		(514-524)
6) Tiles	2 hr	7
a. Materials		(462-465)
b. Preparing deck		(476-478)
c. Installing tiles		(474-484)
7) Flashings, Valleys & Chimneys	3 hr	7, 7c
		(523-524)
		(524-541)
Total	15 hr	