



# Asphalt Laydown Technician Training Summary Report

**Tom Gamblin, Industrial Learning Resources Ltd.**

**April 22, 2016**

## Description

Asphalt Laydown Technician Program was sponsored by the *Nova Scotia Road Builder Association* in partnership with *Atlantic Cat*.

Training took place at Nova Scotia Construction Safety Association, Burnside Industrial Park in Dartmouth, NS and Atlantic Cat in Dartmouth, NS.

The “field trip” this year included the service shops at Dexter where the paving equipment was undergoing pre-season maintenance, the asphalt plant, and emulsion plant. An added benefit was the inclusion of the asphalt laboratory.

The program was a four week program from March 28 thru April 22, 2016.

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*“I feel this training will provide me more confidence on the job and allow me to adjust some of my best practices to achieve a better and more consistent outcome.”*

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## Participants

Fourteen participants representing five companies participated in the training program of 120 hours. Participants represented a variety of experience in the paving industry, including crew foremen, paver operators, milling machine operator, screed operators, and quality control. Participants represented backgrounds in highway and commercial paving. The diversity of company, experience and background (commercial and highway) contributed to the overall success of the training.

## Trainers

The following trainers presented the program:

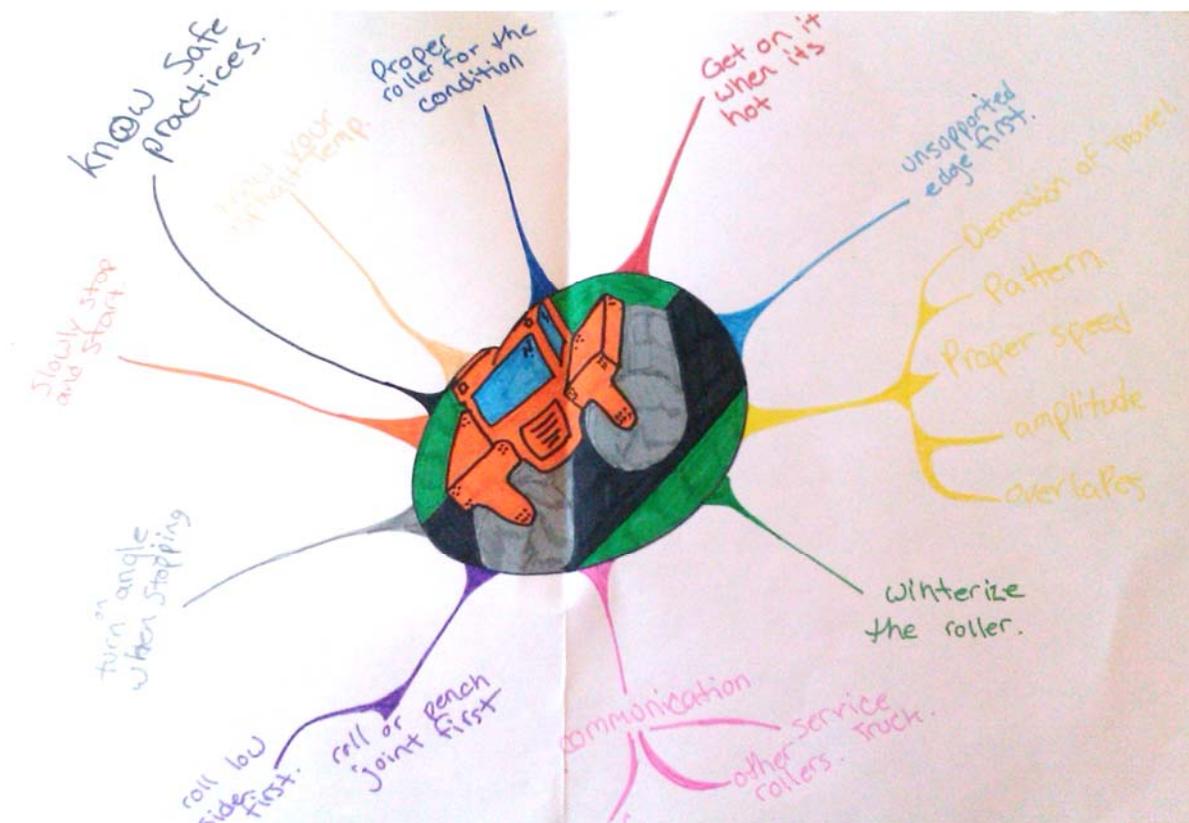
Tom Gamblin	Industrial Learning Resources Inc.
Howard Chandler	Dexter
Marcello Lirusso	Caterpillar of Canada
David Peterson	Caterpillar
Jon Anderson	Caterpillar
Ethan Van Kottan	Weiler

## Contributors

Thank you to the following for their support and contribution to the success of the ALT training:

Gary Wright	Dexter, Machine Guidance Control
Allison Deveau	Atlantic Cat
Colleen Richards	Atlantic Cat
	Atlantic Cat
Robert Halfpenney	Atlantic Cat, Loader Operator
Deven Shaey	Asphalt Plant, Dexter
Mike Conners	Maintenance Shop, Dexter
Nicole Sinclair	Emulsion Plant, General Liquids

## Mind Mapping



## Participant feedback

The following are examples of some of the feedback received from the course participants:

*I really enjoyed the course, I got a lot out of this course because of how it was taught. The information stayed in my head more than like normal school. I found that mind mapping helped a lot with this.*

*I found that the course gave me a lot more knowledge in the paving business. It's good knowing that there are courses like this out there to give you knowledge about paving, and safety awareness.*

*Before the start of this course, I had some knowledge of asphalt now leaving course I have a tremendous amount of knowledge and would like to thank Tom and Howard*

*This was a great course and anybody dealing with asphalt should take it. I learned a lot that would have taken a long time to learn on the job*

*This course had a lot of information and knowledge. It was made easier for learning because it wasn't just taking notes and talking. Everyone in the group was a great bunch of guys.*

*Before this course, I wouldn't have ever envisioned me as a foreman or in a supervisory role, but now I feel that I could definitely be one with the right amount of experience behind me.*

*All information I learned from this training course will change the way I will do things on the job*

*I came out of this course with a lot of information that I'll be using for years to come*

The following is feedback relating to the two questions

- What information you find most variable in this training?
- What information from this training will change the way you do things on the job?

*How to do spread rates, and how to determine or calculate how far a set tonnage of asphalt will go at various depths*

*I'll be able to help ensure that we are laying a good quality mat and be able to detect any problems before we carry on too long*

*All information I found valuable. Specifically understanding segregation and how to prevent it. The importance of paving by the numbers, safety procedures, and the ability to identify hazards at the worksite*

*Understanding processes and procedures and the science and physics behind the paving will make me more knowledgeable and more versatile person on the job*

*All information learned from this training course will change the way I would do things on the jobsite because all information from this training course was very useful*

*The information on segregation and mat defects and knowing how it is caused and what a person can do to prevent it. Also, being a rolling operator. I picked up many best practices that will help me become more efficient*

*Everything in the course I found valuable. Most importantly, though, was the real life experience and stories from sharing in the classroom group discussions*

*Everything I'm doing on the job will make me reflect back to what I've learned here in this course*

*I can use what I learned from this course to work more efficiently and save my company money.*

*The most valuable part of this course for me is the information that I learned from others in the class from the group discussions*

*I will be more aware of safety and how to spot danger and to warn others*

*I now know what things look out for that affect bonuses and penalties and what to do and not to do. I found problem-solving in mat defects to be most valuable to me*

*The sections on job safety and mat defects will help me change my ways of the job.*

*I realize that everything I do with asphalt will have a positive or negative reaction, but I also learned how to troubleshoot and fix the problems*

All participants were positive about the value of the training and expressed developing more confidence in their ability.



## Class Evaluation

Maximum total score = 56

Maximum Average Score = 4

	Total	Average
Meeting your expectations	54	3.86
Level of instruction	56	4.00
Length of presentation	53	3.79
Usefulness of participant guide	52	3.71
Effectiveness of visual aids	52	3.71
Effectiveness of learning activities (discussions, groupwork, handouts)	55	3.93
Overall effectiveness of the training presentation	54	3.86
		3.84

## Trainer Evaluation

Maximum total score = 56

Maximum Average Score = 4

	Total	Average
Knowledge of the subject	55	3.93
Preparation for training presentation	55	3.93
Professional demeanour	56	4.00
Providing opportunities for discussion of material	56	4.00
Organization	55	3.93
Overall skills of the trainers	56	4.00
		3.96



## Participant Previous Knowledge Assessment

1. Participants indicated their perceived level of knowledge prior to the training session.
2. Participants indicated their perceived knowledge after the training.
3. Each area is representative of the Learning Outcomes for the training program.
4. Percentage growth represents the participants' perceived growth in knowledge for the outcome.

Outcome	Improvement
Paving industry in Canada and the Nova Scotia	105%
History of paving future trends	253%
Basic asphalt road construction	72%
Asphalt production and asphalt plants	111%
Five processes of placing asphalt	61%
Quality control	110%
Your rights and responsibilities under the OHS Act	26%
Asphalt safety in the work site safety	32%
Hazard recognition and control hierarchy	41%
Heat stress and heat stroke recognition of symptoms and treatment	25%
Responsibilities of paving crew members	26%
Equipment safety warnings and labels	32%
Inspecting hydraulic hoses and connections	69%
General maintenance of paving equipment	50%
Read and interpret ISO symbols	53%
Paver factors that influence mat thickness	62%
Forces that affect the screed and influence mat quality	72%
Adjusting and setting up the screed	90%
Rolling longitudinal joints	48%
Rowing transverse joints	53%
Milling machines and their operation	84%
MTV operation	65%
Handwork – raking, luting and shoveling	25%
Small gas operated equipment	21%
Recognition of mat defects	56%
Prevention and correction of mat defects	62%
Causes of segregation, prevention and control	74%
Paving by the numbers	87%
Calculation of spread rates and the importance of spread rates	116%
Machine guidance control	108%
Milling by the numbers	125%
Commercial paving, parking lots, driveways, other urban	73%
Duties and responsibilities of a supervisor of a paving crew	76%
Calculate the required amount of asphalt for a paving job	132%

## Recommendations

The following recommendations are offered for consideration:

1. Early contact with Cat (as early as September) will facilitate scheduling of instructors and equipment for the spring. The Cat trainers are very busy come spring time and early booking is necessary. It would be easier to cancel in December than to plan in January.
2. Sharing the course with Cat. I have made this recommendation before and has been declined. There are no secrets contained in ALT Laydown Technicians Certification program and 99% of the content is available in the public domain. By sharing it would be beneficial to the Cat trainers in knowing what has been previously covered in the classroom portion of the course. This would then become an advantage to the ALT trainees as they would be able to benefit with more practical training from the expert Cat instructors. All course material can be "Watermarked" to discourage reproduction. It is a "win-win".
3. The ALT program differs in the method of delivery from more traditional training methods and this difference has contributed to the continual success the program has attained. Learning is built into the program and allows the participants to become confident in returning to the classroom. These adult learning methods can be acquired by someone who has a passion to help others learn. The NSRBA will need to consider the future of the ALT program and work to recruit a person to shadow the next course and receive training to be an effective facilitator..

## Summary

This year's trainees were one of the more enjoyable groups to work with. The contribution of participants towards learning discussion both in small group and large group was excellent. The knowledge and experience in the room made learning easy. We had a lot of fun and enjoyment learning this year.

The experience for the participants was successful as indicated by the written comments collected and the positive remarks during the summary session. Thank you to the employers and members of NSRBA that attended the session.

Thank you to Mike Harlow, Allison Deveau and Collen Richards at Cat Atlantic for again providing the program and participants with the usual great hospitality. Your continuing partnership is valued.

Thank you Marcello Lirusso, Caterpillar of Canada Corp for your effort in pulling the expert instructors together and bringing the sunshine from Upper Canada. We look forward to working with you next year.

Thank you to Grant, and the NSRBA for the support you continue to provide to the ALT Training Program and to myself and Howard.

Tom Gamblin  
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