

# Understanding the Workforce Development Needs of Nova Scotia's Road Building Industry

Prepared for:  
Nova Scotia Road Builders Association

By  
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## Executive Summary

The road building industry in Nova Scotia is a major economic contributor to the provincial economy. The Nova Scotia Road Builders Association is the voice of the industry and its 30 largest members (of approximately 150 companies that serve the road building industry) directly employ 3,700 Nova Scotians and provide an annual payroll of \$133 Million (not including benefits).

These 30 large companies are increasingly finding it difficult to employ the type of workforce they need to be successful. Due to a variety of factors, companies have not been able to find qualified people to meet their needs and based on the demographics of their workforce this is going to get more difficult as retirements grow and fewer entrants are available.

Based on qualitative and quantitative research concerning hiring, retention, training and succession planning that was shared in an industry forum, three areas were identified in which work needs to be done to build the human resource capacity of the road building industry in Nova Scotia. Although some of it falls to individual companies, most of it will only move forward if approached from an industry perspective. The three areas are:

- Training – to ensure that the proper training is readily available for new and existing workers
- Awareness – to build a positive image of the road building industry to prospective entrants into the industry (and to their career choice influencers)
- Attraction and Retention – to build an industry that is sustainable both as individual companies and as a whole

Under these areas a number of activities are recommended and the key ones are highlighted below:

- Developing greater collaboration between the Nova Scotia Road Builders Association the Construction Association of Nova Scotia.
- Aligning training more rigorously with standards and competencies in a manner that serves the entire Province.
- Work with the Canadian Construction Association to address issues associated with Employment Insurance.
- Connecting the Road Builders Association to the High Schools, specifically The O<sup>2</sup> Program and CANS's Building Futures Program.
- Focusing external communication on the viability of Road Building careers as a first choice.
- Secure a stabilized tendering process that spreads work evenly throughout the year and commences early enough in the year.
- Encourage member companies to be creative in attracting and retaining workers.



## **Introduction and Background**

The Provincial Department of Labour and Workforce Development (The Department) at the request of the Nova Scotia Road Builders Association (The Association) is seeking to better understand the employment impact of the Road building industry as well as the workforce development issues associated with hiring, retaining, training and succession planning.

The Department and The Association convened a Steering Committee<sup>1</sup> to oversee a project to address these issues and propose options to meet the future workforce development needs of the industry. The research findings are based on three separate activities:

1. Twenty-three face-to-face and phone qualitative interviews with the Nova Scotia-based Ordinary and Affiliate members of The Association conducted between October and December 2009. A copy of the interview questions is included in the appendix.
2. Twenty-one quantitative surveys completed by the Nova Scotia-based Ordinary and Affiliate members of The Association conducted between October and December 2009. A copy of the survey is included in the appendix.
3. Review of successful models of collaboration between industry and education.

This report summarizes the findings of this research and seeks to provide a clearer understanding of the workforce development needs for Nova Scotia's Road building industry. The findings served as the basis for an Industry Forum in March of 2010 where the issues were presented, discussed and possible solutions developed and included in this final report.

## **Understanding the Workforce Needs**

### **Profile of Employers Interviewed**

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The Association and the Steering Committee identified the 30 Ordinary and Affiliate members of The Nova Scotia Road Builders Association (who are based in Nova Scotia) to include in the research. Participating member companies of The Association include all of the 11 Ordinary members and 12 Affiliate members. A list of the companies who participated in this work is provided in the appendix.

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<sup>1</sup> Steering Committee consists of Grant Feltmate, Brad Scott, Greg MacDonald, Ron Dunn, Paul MacDonald, Jeremy Neily, Jacques Pelletier and Steve Foran.



## Findings from the Quantitative Surveys

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To gain fuller understanding Nova Scotia’s road building industry, a quantitative survey was developed and administered to complement and strengthen the qualitative information and insights gathered from the face-to-face and phone interviews. The Nova Scotia Department of Labour and Workforce Development developed the survey with the assistance of the Nova Scotia Road Builders Association and the Steering Committee.

All Ordinary and Affiliate companies participating in the interviews were asked to complete the quantitative survey to provide some basic statistics on their workforce including factors such as wages, occupations, age, gender, seasonality and retirements. Of the 23 interviews completed, 21 companies returned their survey, providing a fairly complete picture – capturing 82% of employment in Ordinaries and Affiliates. Despite not obtaining information from all 30 companies, the high survey response rate and broad interview coverage provides some re-assurance the data is reflective of the group as a whole, including those Ordinaries and Affiliates not participating.<sup>2</sup>

The decision was made by the NSRBA and Steering Committee to only capture information on Ordinaries and Affiliates for the purpose of this study. As such, the statistics contained within this report, and the use of the term industry, do not reflect the 120 Associate members of the NSRBA, whose contribution and supporting role to the overall road building industry in Nova Scotia is significant.

The survey reinforces the critical role that the road building industry plays in the province’s economy. Notable highlights are listed below while a more detailed analysis follows.

- Ordinary and Affiliate members of the NSRBA generate an annual payroll of \$133 million while directly employing close to 3,700 people, of whom 97% are employed on a fulltime basis. While employment is primarily seasonal in nature, longer work weeks generate income that makes up for this seasonality. On an annualized basis, workers still manage to average 41.5 hours per week.

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<sup>2</sup> Given there are 30 companies in total, which is not large, a census approach was adopted instead of sampling. As such, sampling errors cannot be estimated, which is why confidence intervals are not provided in this report. There are other (non-sampling) errors that can impact the integrity of the data. Of most concern to this research is possible coverage bias and reporting errors. All attempts were made to minimize systematic errors, which led to follow-ups with companies, for example, in cases where data inconsistencies were identified.



- The age of the road building workforce is slightly younger than that of the broader economy and the distribution of age is comparable, however the industry's reliance on a readily available young workforce will prove very challenging in the years ahead due to a shrinking youth population.
- Ordinary and Affiliate members lost approximately 135 workers in 2008 to retirements and people leaving the industry. This rate of attrition is expected to increase by 22% over the next five years, largely due to growing retirements, and companies can expect to lose about 1 in 5 workers over this period.
- 56% of the employment in the industry is concentrated in two occupational classes, namely General Labourer and Heavy Equipment Operator. Labourers tend to be younger while Managers/Superintendents and Truck Drivers tend to be older.
- The average wage across Ordinaries and Affiliates is \$18/hour for all occupations and \$19.75/hour when General Labourers are not included (General Labourers average \$14/hour).
- 75% of the work undertaken by Ordinaries and Affiliates is constructed on behalf of a government. Every \$10 million spent on road and infrastructure work in Nova Scotia translates into 55-65 jobs for Ordinary and Affiliate members of the Nova Scotia Road Builders Association. The full impact on the economy from this work, not captured in this report, is much larger considering the spin-offs through sub-contracts and expenditures on local services such as food and accommodations.

**Workforce Characteristics** – The profile of the workforce characteristics as viewed through different lenses is summarized in Table 1.

As of the first week of September 2009, an estimated 3,678 individuals were working for Ordinary and Affiliate companies.<sup>3</sup> Given the nature of the industry, work is heavily seasonal and so it's not surprising 3 out of 4 workers are employed less than 10 months out of the year. However, during the on-season, workers make up for the down-time of the off-season through longer work weeks. For instance, on an annualized basis, workers still manage to average 41.5 hours per week. The results from the survey indicate the vast majority of workers (97.4%) are employed on a full-time basis (i.e.,

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<sup>3</sup> This aggregate estimate is based on a weighting scheme that used average employment by membership status as weights to estimate employment for the 9 non-participants. The purpose of applying weights is to improve the accuracy of aggregate estimates. The choice of membership status seems appropriate given there are distinct differences in size and activity among the two classes. The average size of an Ordinary is 226 workers and an Affiliate is 54 workers.



working 30 or more hours per week on average). This differs significantly from the provincial average full-time employment ratio of 82%.

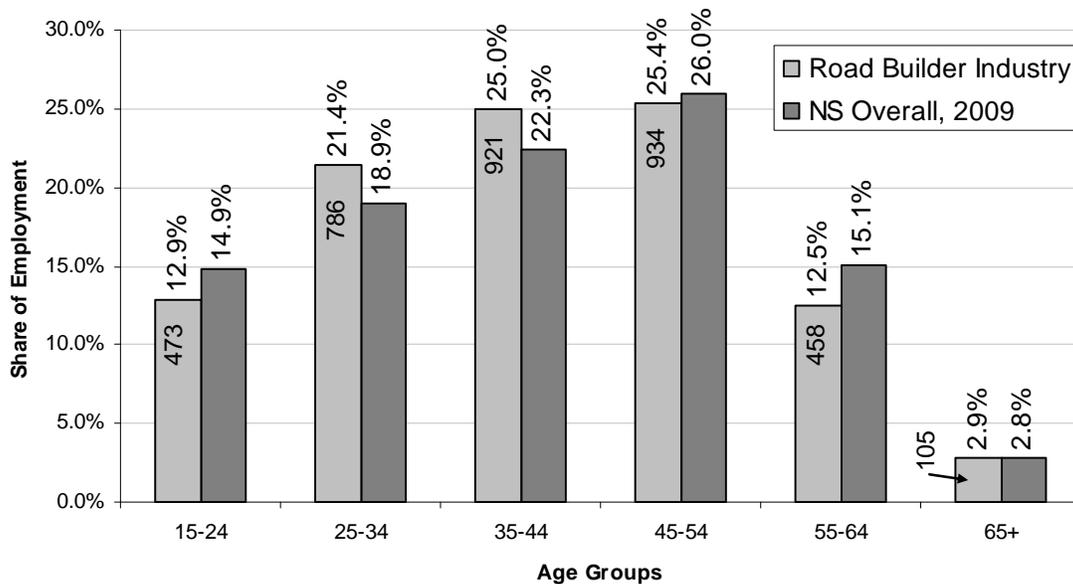
<b>Table 1: Workforce Characteristics</b>	<b>Number Employed</b>	<b>Share of Employed</b>
Total Industry Employment	3,678	100%
<b>Usual Hours Worked</b>		
Full-time (30 hours or more per week)	3,581	97.4%
Part-time (less than 30 hours per week)	97	2.6%
<b>Seasonality</b>		
Seasonal (less than 10 mo./year)	2,723	74.0%
Non-Seasonal (10-12 mo./year)	955	26.0%
<b>Tenure with Company/Employer</b>		
Less than 5 years	1,822	49.5%
5 to less than 10 years	861	23.4%
10 years or more	995	27.1%
<b>Gender</b>		
Male	3,361	91.4%
Female	317	8.6%

Interestingly, about 50% of the industry has worked for their current employer for less than 5 years. At the same time, about one quarter of the workforce has been working for the same employer for more than 10 years.

In terms of gender, 9 in 10 workers in the road building industry are male, which is not overly surprising given the historical makeup of the workforce. The male/female ratio for road building is in line with the overall construction industry, but differs from the overall provincial workforce, where the male/female ratio is 50/50.

**Age Distribution** – The age distribution of the industry is comparable to the overall provincial workforce in that the majority of workers (72%) are of the age group 25 to 54. However, the industry does appear to be slightly younger than the provincial workforce, likely given the reliance on younger workers to fill general labourer positions, which account for 1 in 3 jobs in the industry. This is not to say the industry will not face the demographic changes of an aging population and workforce in the years to come. Currently, roughly 1 in 7 workers in the industry are over age 55, compared to 1 in 6 provincially. As individuals begin to retire at a greater rate, more positions will need to be filled and this requires planning and possibly further training to move persons through the organization.





**Figure 1: Employment Share by Age Group**

Complicating matters is a declining youth population in Nova Scotia. The road building industry, like many others including the service sector, has benefited in the past from an ample supply of young adults looking for employment. However, this trend is changing which has the potential to lead to difficulties in finding qualified, dedicated workers. For instance, looking ahead over the next 20 years, the population aged 15 to 34 is expected to decline significantly in Nova Scotia by an amount of 55,000, or 23%.<sup>4</sup>

**Retirements and Turnover** – An aging workforce will bring growing retirements. Nova Scotia’s overall labour market can expect 40,000 vacancies due to retirements over the next 5 years, a rate of 8.7% of the employed workforce.<sup>5</sup> The survey data collected on retirements and retirement expectations also indicate an upward trend in retirements for the road builder industry in Nova Scotia. In 2008, there were an estimated 35 retirements from Ordinaries and Affiliates (a rate of 0.9% of the employed workforce). Over the period 2009-2013, these companies can expect on average they will need to fill 65 positions per year due to retirements (a rate of 1.7%). Accumulated over five years, they can expect to lose 8.7% of their current workforce (i.e., 325 workers) due to retirements, which is approximately 1 in every 11 workers. Although the numbers may not seem large, the results are consistent with expectations for the overall workforce in Nova Scotia and the situation will be compounded by declining youth availability.

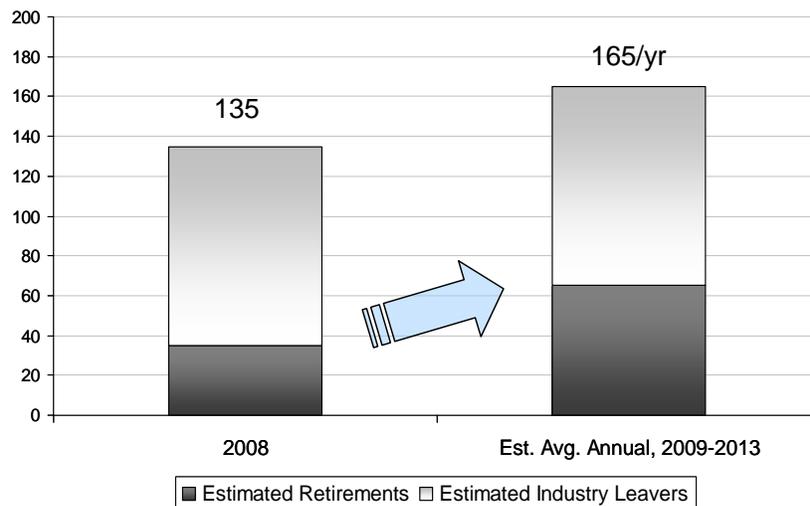
<sup>4</sup> Source: Nova Scotia Department of Finance

<sup>5</sup> Source: Canadian Occupational Projection System (COPS), 2009-2014; a partnership between the Department of Labour and Workforce Development and Service Canada.



In addition to the need to replace workers due to retirements, employers are continuously faced with the challenge of replacing workers that pre-maturely leave their position in the company and possibly the industry altogether. To understand this issue better, companies were asked to provide estimates of the number of persons that left their company in 2008 and of those, the number that left the industry in Nova Scotia (with a few exclusions).<sup>6</sup> Workers leaving a company follow two streams. They either join another company within the industry or they leave the industry altogether, which includes those returning to school or migrating out of province. At a company-level, an individual leaving an organization poses an immediate challenge as the company must replace them; and generally whether the individual remains in or leaves the industry is of lesser concern to the company. However, taking a broader perspective, those who leave the industry represent a shared challenge that needs to remain at the forefront of industry planning, particularly given the expected decline of available replacement workers due to the aging demographics.

In 2008, an estimated 8.1% of the workforce left their company, the majority of which were in non-managerial positions (95-97%). Of the company leavers, about one-third left the industry in Nova Scotia. As such, the estimated industry “leaver” rate is 2.8% for 2008, but this could vary year-to-year depending on conditions. The implication of this trend is that, with all else constant, the industry replaces 2.8% of its workforce each year, amounting to roughly 100 workers annually.



**Figure 2: Retirements and Industry Leavers**

<sup>6</sup> Reasons excluded for leaving a company include retirements, layoffs, fires, end of the work season and the end of a contract/term. The reliability of these estimates depends on the ability of companies to accurately track these trends. In some instances, companies did not report results given they do not track the information.



Figure 2 shows the combined impact of retirements and industry leavers on the need for replacement workers in the industry. Given the retirement outlook and the current rate of industry leavers, the industry can expect it will need to replace 1 in 5 of its current workforce within five years.

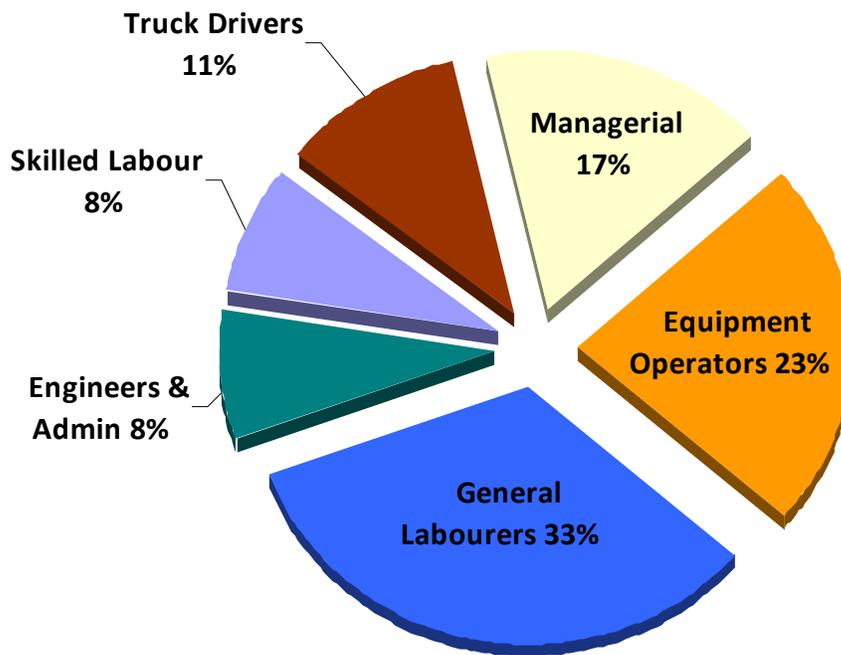
**Occupations** – To gain a better understanding of the types of skills the road building industry employs in Nova Scotia, companies were asked to provide occupational details on their workforce.<sup>7</sup> The results are illustrated in Figure 3 and indicate that 1 in 3 positions are general labourers (encompassing a broad range of job functions that are considered as general labour), 1 in 4 positions are machine operators and 1 in 6 positions are managerial or supervisory. Beyond these broad categories, a wide range of skill sets are employed including truck drivers (11%), a wide range of skilled trades (5.5%), administrative staff (4.9%), heavy duty equipment mechanics (2.8%), and engineers and estimators (2.7%).

The detailed breakdown of each job classification is summarized below in Table 2.

<b>Table 2: Occupational Employment</b>	<b>Number</b>	<b>Share</b>
General Labourers (e.g., Flaggers, Labourers)	1,214	33.0%
Machine Operators - Heavy Equipment	650	17.7%
Truck Drivers	404	11.0%
Supervisors/Foremen	399	10.9%
Managers/Superintendents	231	6.3%
Skilled Trades (e.g., Concrete Finishers)	202	5.5%
Administrative (e.g., HR)	179	4.9%
Machine Operators - Asphalt	111	3.0%
Heavy Duty Equipment Mechanics	103	2.8%
(Non-managerial) Engineers and Estimators	99	2.7%
Machine Operators - Other (e.g., Crane)	86	2.3%
<b>Overall, All Occupations</b>	<b>3,678</b>	<b>100.0%</b>

<sup>7</sup> Occupations were grouped for quality purposes and to reduce to the burden on companies completing the survey. For instance, the skilled trades and general labourer groups include a number of skill sets. This was done with the approval of the Steering Committee and reflects the main occupational interests of the research. Also keep in mind, these are estimates and reflect a point in time in the working-year.





**Figure 3: Road Building Industry Occupations**

Table 3 presents the age distributions for each occupation. While 15.3% of the overall industry is reportedly 55 years of age or older, three occupations have values in this age range that far exceed this average, indicating a greater percentage of the workers in these occupations fall into the oldest age group. These occupations include managers and superintendents (28.1%), truck drivers (25.2%) and administrative staff (20.3%).

At the same time, some occupations are younger than average. Looking at the age group 15 to 34, general labourers (51.9%), non-managerial engineers and estimators (51.4) and the skilled trades (36.4%) all have a greater than average share of their workforce in the youngest age group. Interestingly, non-managerial engineers and estimators have both an above average share in the youngest and oldest age group. In other words, there are not a lot of these workers in the middle age group – they’re either young or old, relatively speaking.

Table 3: Occupational Age	% Employed by Age Group			
	Ages 15-34	Ages 35-44	Ages 45-54	Ages 55+
General Labourers (e.g., Flaggers)	51.9%	21.1%	18.1%	8.9%
Machine Operators - Heavy Equipment	31.3%	27.6%	24.4%	16.7%
Truck Drivers	15.8%	25.8%	33.2%	25.2%
Supervisors/Foremen	22.5%	29.2%	31.7%	16.5%
Managers/Superintendents	13.5%	28.1%	30.3%	28.1%
Skilled Trades (e.g., Concrete Finishers)	36.4%	20.8%	28.6%	14.3%
Administrative (e.g., HR)	33.3%	19.6%	26.8%	20.3%
Machine Operators - Asphalt	30.2%	15.1%	41.5%	13.2%
Heavy Duty Equipment Mechanics	22.5%	37.5%	26.3%	13.8%
(Non-managerial) Engineers and Estimators	51.4%	18.9%	12.2%	17.6%
Machine Operators - Other (e.g., Crane)	29.2%	39.6%	20.8%	10.4%
<b>Overall, All Occupations</b>	<b>34.3%</b>	<b>25.0%</b>	<b>25.4%</b>	<b>15.3%</b>

Companies also reported retirement expectations by occupation. As one might expect, the results are generally consistent with the age distribution trends. That is, older occupations tend to have higher expected retirement rates. Table 4 summarizes the estimated number of retirements by occupation, the share of retirements and the share of the workforce. Those occupations accounting for an above average share of the retirements include heavy equipment machine operators, truck drivers, supervisors and foreman, managers and superintendents, heavy-duty equipment mechanics and non-managerial engineers and estimators. Not surprising, those occupations accounting for a below average share of expected retirements tend to be younger occupations; these include general labourers, skilled trades, administrative staff, asphalt machine operators and other various machine operators.



Table 4: Occupational Retirements	Estimated Retirements over the next 5 years		
	Number	Share of Retirements	Share of Workforce
Overall, All Occupations	319	100%	100%
<b>Above Their Workforce Share</b>			
Machine Operators - Heavy Equipment	75	23.6%	16.9%
Truck Drivers	54	17.0%	11.3%
Supervisors/Foremen	38	12.1%	11.1%
Managers/Superintendents	35	11.0%	6.3%
Heavy Duty Equipment Mechanics	11	3.3%	2.8%
(Non-managerial) Engineers and Estimators	<10	-	2.6%
<b>Below Their Workforce Share</b>			
General Labourers (e.g., Flaggers)	54	16.9%	33.3%
Administrative (e.g., HR)	15	4.8%	4.9%
Skilled Trades (e.g., Concrete Finishers)	13	4.1%	5.4%
Machine Operators - Asphalt	<10	-	3.2%
Machine Operators - Other (e.g., Crane)	<10	-	2.3%

**Earnings** – Companies were asked to provide either average hourly or average annual earnings for their workforce; the values do not reflect benefits and other non-wage compensations. The results for each company were combined to generate average earnings for each occupation across the industry. Some variation is found across companies for a given occupation and across occupations within a given company.<sup>8</sup> The average values reported should not be viewed as the “going wage” for new hires, as this depends on factors such as experience and qualifications.

The labour market tends to reward experience and skills through higher wages. Persons working in occupations requiring a lot of experience and credentials, including managers, engineers and mechanics can expect to earn a wage that reflects their level

<sup>8</sup> In the former case, this may partly reflect that within certain occupational groups, some employers may rely more on some skill sets than others and that the wages across these skill sets may vary.



of qualification. On the other hand, positions requiring less experience and formal credentials, such as general labourers and administrative staff, tend to earn lower wages. The results in Table 5 are consistent with this view. The average earnings estimated for Ordinaries and Affiliates is \$18.00 per hour, which is just below the provincial average of \$19.00 per hour in 2009.<sup>9</sup> When general labourers are excluded from this calculation, given they account for 1 in 3 jobs and they earn the lowest wage, average earnings for the remaining workforce is estimated at \$19.75 per hour.

<b>Table 5: Occupational Earnings</b>	<b>Average Earnings*</b>
Managers/Superintendents	\$ 69,600/yr
(Non-managerial) Engineers and Estimators	\$ 25.00/hr
Supervisors/Foremen	\$ 21.50/hr
Heavy Duty Equipment Mechanics	\$ 21.50/hr
Machine Operators - Heavy Equipment	\$ 19.00/hr
Machine Operators - Other (e.g., Crane)	\$ 18.25/hr
Machine Operators - Asphalt	\$ 18.00/hr
Truck Drivers	\$ 17.75/hr
Skilled Trades (e.g., Concrete Finishers)	\$ 17.25/hr
Administrative (e.g., HR)	\$ 14.75/hr
General Labourers (e.g., Flaggers)	\$ 14.00/hr
<b>Overall, All Occupations</b>	<b>\$ 18.00/hr</b>
<b>Overall, Excluding General Labourers</b>	<b>\$ 19.75/hr</b>

\* The estimates are weighted and rounded as of September 2009 (values do not reflect benefits or other non-wage compensations)

**Industry Impact** – The road building industry in Nova Scotia makes a significant contribution to the overall provincial economy and to rural communities throughout the province. In 2008, Ordinary and Affiliate companies generated approximately 7.5

<sup>9</sup> The latter is based on Statistics Canada’s Labour Force Survey. Comparing and interpreting results based on different sources and different methodologies, as is the case here, should be done with caution.



million direct working hours which led to an estimated \$132.9 million in gross earnings for those workers.

Of the 21 companies completing the survey, 12 fully completed the questions in the section regarding company revenue, while the remaining companies either partially completed or did not provide any information. For that reason, the results from the revenue analysis may be less robust than the other quantitative results reported throughout.

The results from the survey indicate Ordinaries and Affiliates earned 75% of their revenue in 2008 from road building work through publicly-funded sources, with the remaining coming through private road building contracts and other sources (e.g., sales of parts). These companies earned roughly 90% of their revenue from Nova Scotia-based sources, with the remainder coming from out of province.

Table 6 highlights the results of the revenue analysis, showing that an average company with \$10 million in annual revenue would generate 120,000-130,000 hours of work in a year, which would support 55-65 jobs/positions. However, given there is attrition throughout the year due to company leavers and retirements, 60-70 persons would be required to complete the work. As previously stated, the full economic and employment impact would be much larger considering spin-off activity through sub-contracts and expenditures on local services including food and accommodation.

<b>Table 6: Scenario</b>	
Annual Revenue	\$10 million
Hours of Work	120,000-130,000 hours
Jobs/Positions	55-65 jobs
Persons Required (given attrition)	60-70 persons



## Findings from the Qualitative Interviews

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Semi-structured in-depth interviews were conducted with senior representatives from 23 members of the Nova Scotia Road Builders Association. The interviews explored workforce issues and potential solutions related to hiring, retention, training and succession planning. This section identifies the emergent themes from the interviews.

**Hiring Practices and Issues:** There is a fairly consistent approach with the employers interviewed who identified the following practises and issues:

- When it comes to hiring, most employers rely heavily on word-of-mouth and referrals from employees. This is cited as the most successful way to attract new employees. Newspaper advertising is the second most common way to look for people and the success with this medium is mixed. Employers use both local and provincial papers to advertise and generally seem to have more success with locally based newspaper ads and recruitment. The Internet was noted as an increasingly more successful way to find new people.
- Many employers cited that the best new employees are likely to come from people with a background in farming, fishing or forestry. These people have the right work ethic and generally are very mechanically inclined. It was noted by two respondents that the pool of people coming from these industries is shrinking because of declines in the fishing, farming and forestry sectors.
- The main challenges facing employers in finding new people are:
  - There is no shortage of people but there is a shortage of qualified and experienced people. Those with experience often overstate their experience on their resume.
  - Few young people are applying and fewer still apply as a first choice, rather the construction industry is seen as their final option. One respondent commented, “People tend to dumb down construction thinking anyone can do it.” Another commented, “We need to find more people and raise the bar for our people.” When they do find young people, they don’t have the experience. However this observation is properly placed in context by two participants who commented, “We can’t blame young people for being young”, and “Training is a two-way street. We can’t have it go our way all the time.”
  - Finding people with the right work ethic. It is not common to find people willing to begin work at 5:30am, work away from home, and work extended days and extended weeks.



- Although employers rely on references to determine if someone is qualified there is often no other way to assess someone's abilities than to hire them and test them. This latter process is time consuming and costly.
- The occupations that are most difficult for employers to fill are:
  - Heavy Equipment Operators (16 mentions)
  - Asphalt workers (5 mentions)
  - Supervisors, Skilled Labourers (4 mentions each)
  - Concrete (3 mentions)
  - Crane/Boomtruck operator, Heavy Duty Mechanic (2 mentions each)
  - Pipe Layer, Welder, Office worker, Fencer (1 mention each)
- When asked about the certifications that employers look for in new hires, the most common responses were "experience" and "attitude and character". Interestingly, these are not certifications. The certifications noted were:
  - Drivers License and Abstract (almost everyone)
  - Mechanic License (not all), Man-lift Ticket, Blasting Ticket, Crane/Boom Truck Ticket, Welding Tickets, Journeyperson/Apprentice Carpenter

**Retention Practices and Issues:** There were not many issues identified associated with retaining employees.

- Every respondent indicated that the majority of their workforce returns each year when the season restarts.
- Respondents commented that it is important to provide good benefits and a work environment that encourages people to stay. Those that commented suggested that retention is something that falls to each individual employer.

**Training Practices and Issues:** A successful Road Building company is built upon well trained and qualified people. The key issues and practises are:

- 100% of the companies interviewed do training. The most common and effective training provided by employers is on-the-job training. This on-the-job training is very similar to an apprenticeship however it is not formalized. None of the companies have a formal system of on-the-job training although some use competencies that are assessed on job performance.
- The challenges with on-the-job training are that it is hard to deliver when companies are busy, there is only one seat in a machine and they don't have a specific place to



train. Several commented that the industry is lacking in terms of its ability to internally develop and train staff.

- Respondents shared these perceptions of Heavy Equipment Operator (HEO) programs and graduates coming fresh into the industry:
  - These programs are a good start but students need experience with seat time
  - Students in HEO programs are there because they need to take a course to maintain Employment Insurance benefits
  - Graduates come out thinking they are ready for work and have a very over-inflated perception of their experience
  - Seems like the people in the courses don't have a great background and are not ideally suited to the course
  - Although they have found some good people, the feeling is that this is an exception
  - Lack of knowledge about the qualifications of the instructors and curriculum
- Road Builders use a variety of other means to train and develop their workforce and each company seems to have a preference for what works best for them. One commonality is that they do most of this training in the "off season". The two lists below indicate the specific training programs companies use and the way in which they deliver them:
  - COURSES: Safety training, CPR, First Aid, Transportation of Dangerous Goods, Confined Space, Air/Gas Monitoring, Environmental Course, Water Alteration Course, Fall Arrest, Traffic Control, WHMIS, Driving Improvement, Chain Saw, Trenching, Concrete pumping
  - DELIVERY MODES: fully in-house, bring someone in to deliver it, rely on a union, send people to external courses locally in Nova Scotia (St. John Ambulance, NSCSA, CANS), equipment suppliers (locally and abroad), send people to courses afar (asphalt, concrete).
- Several commented on the need for better trained people due to the increased complexity of equipment along with changing processes associated with more demanding production standards. The specific areas of training that are needed for the industry are:
  - Supervisory (14 mentions)



This includes items such as IT, communications, project management, leadership, and technical writing with a focus on the construction industry

- Asphalt (9 mentions) two noted the Nova Scotia Asphalt User Producer Association program
- Pipe Laying (4 mentions)
- Crushing/Screening (4 mentions “for” and 4 mentions “against”)
- Technical Surveying *Total Station* (3 mentions)
- Blasting, Roller Operation, Concrete Finishing (2 mentions each)
- Grading, Drilling, Equipment Operation, Literacy, EGART, Aggregate Testing, Basic Math & Writing (1 mention each)

Of note: **EGART** – strong recommendation to have certification because of criticality of this important safety feature of the highway system. **Literacy** – this was only mentioned once but was suggested that it is an industry wide issue.

**Succession Planning Practices and Issues:** Few issues were identified specific to this area however it is generally common that progression in a company begins as one starts as a labourer or on a traffic control crew and then gradually works one’s way up to operator by gaining experience in other aspects of the work. In only a few cases is there a straight-forward exception to this and it occurs when the employee would have to cross trade unions to advance.

**Potential Solutions and Ideas Suggested During Interviews:** Participants indicated a willingness to develop solutions and were eager to offer potential ideas. All of their ideas are included here for completeness.

- The solution lies in working collaboratively with government, industry and education. Employers seem to recognize the unique value that training organizations and governments each offer.
  - Establish an industry-educational partnership that supports a Heavy Equipment Operator program serving the entire road building industry. Those that did not mention this but when prompted with it, were supportive and believed that it could work if industry collaborated.
  - Establish a common set of competencies for equipment operators that would be recognized throughout the industry.
  - Look to other jurisdictions for what works.
  - Do things in high schools to promote the road building industry as viable career option that is worthy of a first choice rather than last resort.



- Have the government spread work out evenly throughout the year and be ready to begin work early in the year. The rationale is that the more predictable the work is, employers can make commitments and this makes it more attractive to potential and existing employees.
- Diversify your business into new areas in the off-season (snow plowing).
- Ensure that rural regions are served by the solution as rural workers are at the heart of this industry and that is where many come from.
- Use Employment Insurance to help employers guarantee the workforce a 40 hour week in the off season.
- Direct financial support to on-the-job training and development to balance the demand for productivity.
- Provide me a tool that I can use to effectively select the right people when I hire.



## **Collaborative Best Practices between Industry and Education**

Collaborative practices between Industry and Education for the road building industry were reviewed in selected jurisdictions based on the advice of the Steering Committee and as recommended by interviewees. Notable findings from Nova Scotia, New Brunswick, Florida and British Columbia are summarized below.

### **Nova Scotia**

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The Canadian Construction Association offers the Gold Seal Program as a national certification for Project Managers, Superintendents, Estimators and Owners. Two respondents mentioned the program as a possible means to develop supervisors. CCA has accredited 26 courses offered by Nova Scotia Community College as eligible toward this certification as well as 16 construction safety courses offered by HSE Integrated and also courses offered through the Construction Association of Nova Scotia. In addition to meeting a standard, the program has national recognition.

The Construction Sector Council convened a symposium on June 4, 2009 in Saint John New Brunswick to reflect on recent labour market predictions and to map out a regional response to the human resource challenges facing the industry. Of note from the forum:

- Heavy Equipment Operators and Truck Drivers are two occupations where qualified workers will generally be unavailable in local and adjacent markets through to 2017.
- There are many steps that must be undertaken to solve this issue and although a prioritized report has not been published by the organizing committee, key areas of focus identified during the symposium include – promotion of the industry to youth, ensuring labour mobility exists, provide year-round employment, capitalize on diversifying the construction workforce, train the workforce (specialized training, continuing education, supervisory)

The Construction Association of Nova Scotia offers a variety of professional development training programs focused on the construction industry including a 7-day supervisory program (offered over a 4 month timeframe between January and April).

Heavy Equipment Operator programs are offered by Nova Scotia Community College in Port Hawkesbury and Dartmouth, Commercial Safety College in Truro, and by the International Union of Operating Engineers in Falmouth.



## New Brunswick

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The road building industry in New Brunswick (NBRBHCA) has partnered with the New Brunswick Community College as the preferred supplier of training to the industry. Most of the training is headquartered out of NBCC's Miramichi Campus and courses are scheduled many months in advance. Currently NBCC offers the following programs which are promoted on the NBRBHCA website:

- Asphalt Paving/Laydown Technician (7 weeks with most in the field)
- Chainsaw Operations (5 courses from 1 day to 1 week)
- Forest Operations Technician (~3 weeks includes simulator)
- Mechanized Forest Operations (12 weeks with 8 weeks in field)
- Mobile Crane Operation (12 weeks with 7 weeks in field)
- PFWC – Heavy Equipment Operator (7 weeks)
- Snow Fighter (2 weeks with 1 week in field). This is a new program in 2009.

## Florida

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Florida has an extensive array of transportation and road building training available through the University of Florida. Through an initiative known as the Florida Transportation Technology Transfer Centre in partnership with the Centre for Transportation Training, the university offers more than 120 courses supported by a staff team of 20. Serving a population base of 18 million people, they are able to offer courses that range from construction techniques (asphalt, concrete), to supervisory, to safety, to design related programs. Courses are held throughout the state and are scheduled several months before they run.

## British Columbia

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The BC Road Builders and Heavy Construction Association (BCRBHCA) includes training as a prominent part of their webpage and supports a provincial network of certified training programs that are offered by public and private trainers as well as four private contractors. It appears as though the Foundation Course and the Heavy Equipment Operator Course are the programs that are offered regularly (by Douglas College, Vancouver Island University and Operating Engineers Training Institute). They are all governed by an apprenticeship system and include appropriate field experience (except the Foundation course). The programs are:

- Road Building and Heavy Construction Foundation (4 weeks)
- Heavy Equipment Operator (4 weeks in class + 200-600hrs in field/machine)



- Asphalt/Paving Laydown Technician (3 weeks in class + 250-400hrs in field/machine)
- Utility Installation/Graderperson Technician (4 weeks in class + 1000-2000hrs)
- CraneSafe Assessment Program (1 week program including a practical and written assessment for certification)

Currently, certificate and training programs are being developed for:

- Road Maintenance
- Road Building & Heavy Construction Supervisor/Foreman
- Plant Operator Technician



## Key Challenges

The road building industry faces several key challenges related to the development of its current and future workforce. These challenges were articulated by participants in the individual interviews and the group discussion. They include:

1. The industry requires core competencies for key occupations. Currently, standards for skills and competencies vary in consistency and approach across the industry. A more formalized system of assessing skills, recognizing credentials and providing education and training is required. For instance, without standard competencies for entry-level Heavy Equipment Operators, it will be a challenge to replace the large number expected to retire in the years ahead.
2. Greater flexibility and accessibility to specialized training is required by industry for a range of skills (e.g., asphalt, pipe laying, construction supervisory) that are generally common across the industry's workforce. The training approach has to better align with industry's off-season and the challenges imposed by the Federal Government's Employment Insurance program, which currently acts as a disincentive to skills upgrading, need to be addressed.
3. Industry expressed their difficulties in finding qualified people. Recruiting will only become more challenging with fewer young people coming into the workforce and more individuals leaving for retirement.
4. The Road Building Industry must work toward changing its perception and building awareness of its viable career options. The industry must strive to be seen as a first choice for career opportunities, not a last resort.



## Approach

The Nova Scotia Road Builders Association and the Department of Labour and Workforce Development will continue to work together throughout the next phase of activities, involving further discussion, planning and implementation.

The results of the research were presented and discussed with the road building industry on March 1, 2010. The Flip Chart notes from the meeting are transcribed in the appendix. The following key areas of focus summarize a collaborative approach to strengthen the road building industry in Nova Scotia.

## Training and Core Competencies

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It is important that the road building industry ties into existing programs and activities that are successfully operating, particularly when they complement the needs of the industry. Specifically, the industry needs to explore Building Futures, Options and Opportunities (The O<sup>2</sup> Program), creating bursaries, more actively participate in co-op education, connect with high schools, involve existing industry trainers, the use of simulators and other means to provide flexible training that is accessible throughout Nova Scotia.

- The Nova Scotia Road Builders Association will initiate dialogue with the Construction Association of Nova Scotia with the intention of increasing collaboration (there are currently a number of common board members who can assist in making this win-win for both associations).
- Identify the specific core competencies that are required in the industry and engage with trainer organizations to develop standardized programming (or modify existing programming). In doing so, drawing on what exists locally and is available from other jurisdictions.
- Evaluate the potential use of simulators as a training tool and the need for essential skills training for the existing workforce.
- Issues associated with Employment Insurance need to be resolved in both the short term and in the long term. Working with various partners will greatly assist in these efforts.

## Awareness of Industry

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The road building industry is not well understood by those not actively involved within it. The industry needs to communicate a consistent message that will create a positive impression in terms of the many viable career opportunities available within it and the



significant contribution it makes to the Provincial economy. To do so, it was suggested that the industry draw on the existing workforce as promoters and to reach out in new ways, specifically:

- The Road Builders Association needs to explore opportunities to connect with existing programs such as CANS's Building Futures Program and those offered in the high schools.
- The creation (or adoption) of specific Road Builder Trades will give credibility to careers in the industry in the eyes of prospective industry entrants.
- Evaluate current approaches (e.g., annual newspaper insert) and explore new options for promoting employment and career opportunities to the public, including targeting parents – key influencers of career path choices.
- There may be a need to create professional promotional material about the industry that would be available when working with High Schools, youth or influencers (i.e. parents, Guidance Counsellors).

## Recruitment and Retention

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The success of the industry depends upon member companies being able to attract and retain a well-qualified workforce. Although inter-related to the two previous categories listed, the following ideas will assist firms in building their workforce:

- As an industry, work toward securing a stabilized tendering process that spreads work evenly throughout the year and commences early enough in the year so that companies can commit employment to seasonal staff before they leave and take employment elsewhere.
- Create flexible opportunities for senior workers to work in a fashion that meets their needs while they provide valuable mentorship to develop the existing workforce.
- Companies should begin to proactively plan for succession, especially in those high-skilled occupations and those experiencing shortages in qualified workers.
- Companies must provide income stability and benefits, career development opportunities and somehow enable workers to achieve the work/life balance that they seek.



## Appendix

Participating Companies
A. C. L. Construction Limited
Aberdeen Paving Limited
Alva Construction Limited
Basin Contracting Limited
Beaver Marine Limited
Conrad Bros. Limited
Costin Paving & Contracting Limited
Cumberland Paving & Contracting Ltd.
Dexter Construction Company Ltd.
Eastern Fence Erectors
G & R Kelly Enterprises Ltd.
Higgins Construction
Highland Asphalt Limited
Howard E. Little Excavating Limited
Industrial Cold Milling
J. R. Eisener Contracting Ltd.
Maritime Fence Ltd.
Municipal Ready-Mix Ltd.
Nova Construction Company Ltd.
Ocean Contractors Ltd.
Ocean Paving Limited
S. W. Weeks Construction Ltd.
Will-Kare Paving & Contracting Ltd.

### **Additional Contributors:**

G. Feltmate, J. Pelletier; preliminary document review – December 9, 2009

G. Feltmate, K. Buckle, G. MacDonald, R. Dunn, B. Scott, J. Pelletier; feedback on preliminary results – February 8, 2010

G. Feltmate, P. MacDonald, G. MacDonald, R. Dunn, B. Scott, J. Pelletier; draft document review – February 19, 2010

### **March 1, 2010 Industry Forum Participants:**

Greg MacDonald, Brad Scott, Pat Gray, Ray Benere, Gary Rudolph, Ron Dunn, Andrew Lake, John Flemming, Jack Eisener, Susan Ross, Rick Bezanson, Steve MacKenzie, Yuri Power, Jeremy Neily, Jacques Pelletier, Grant Feltmate, Carol Ingraham and Steve Foran.



## Qualitative Research Interview Questions

### Opening Statement:

- **This work is being conducted on behalf of the Department of Labour and Workforce Development in Collaboration with the Nova Scotia Road Builders Association.**
- **The information collected in the survey will be used to profile your sector and to understand current and future labour and training requirements.**
- **Be assured that any company specific confidential quantitative information will be seen only by me and that any information provided during this interview will remain anonymous in the reporting. Information will not be distributed to other parties. The final report will not contain any company-level information.**
- **It should take no more than one hour and I will be taking notes.**

**A1.** Tell me a little about your core business and the work you do.

**A2.** What recruitment issues are you facing/have you faced?

**A3.** Which areas of your business are you having the greatest difficulty recruiting?  
Why?

**A4.** How do you currently recruit new workers?

**A5.** What credentials (beyond crane operator) are needed in people you hire?

**A6.** What training is needed for new workers in the various occupations?

**A7.** How do you train and develop your workforce now?

**A8.** In your business what training is needed? (may probe for need for supervisory level training)

**A9.** Considering the broad range of skills needed in the industry, what skill sets are missing?

**A10.** Are there any other important recruitment, retention, training or succession planning issues? Describe them. What solutions do you envision?



## Quantitative Research Survey

### DISCLOSURE

The following questions require the disclosure of company revenue and human resource information to be used for research purposes. This information will be used to analyze and profile your sector and will assist the Nova Scotia Road Builders Association and the Department of Labour and Workforce Development in understanding current and future labour and training requirements. Please be aware, only aggregated industry-level information will be presented in the final report. The information being collected is for research purposes and is not considered to be in the public realm. It will be held in confidential by the consultant but made available to the Department of Labour and Workforce Development in order to complete the labour market analysis component of this study.

If you have any questions or concerns while completing this survey, please contact Steve Foran at (902) 802-8494

### COMPANY NAME

Company Name: \_\_\_\_\_  
 Head Office Location (County): \_\_\_\_\_

### QUESTION B1

B1(A.) Provide the total number employed by your company (as of the first week of September, 2009).

Total # Employed

B1(B.) For each of the six categories, provide a breakdown on the total number employed.

As a check, the sums within each category should be the same and also equal to total employment as provided in B1(A.)

Category	# Employed
<b>Usual Hours Worked</b>	
Full-time (on average, 30 hours or more per week)	
Part-time (on average, less than 30 hours per week)	
<b>Employee Status</b>	
Permanent	
Temporary	
<b>Seasonality</b>	
Seasonal (less than 10 months a year)	
Non-Seasonal (10-12 months a year)	
<b>Tenure with Company/Employer</b>	
Less than 5 years	
5 to less than 10 years	
10 years or more	
<b>Gender</b>	
Male	
Female	
<b>Location</b>	
Nova Scotia based	
Non-Nova Scotia based	

**NOTE:** A permanent position is expected to last as long as the employee wants it; that is, the position has no pre-determined end date, but could be eliminated due to business closure/layoff, and could include some part-time workers and seasonal. Temporary positions are essentially all non-permanent positions including term, contract and casual work and can also include some (non-permanent) seasonal workers.

### QUESTION B2

B2. Provide estimates of the number employed (as of the first week of September, 2009) for the following occupations, by age group:

Occupation	Age Group						
	All Ages	15-24	25-34	35-44	45-54	55-64	65+
<b>Total</b>							
Managers/Superintendents							
Supervisors/Foremen							
(Non-managerial) Engineers and Estimators							
Skilled Trades - Concrete finishers							
Skilled Trades - Heavy Duty Equipment Mechanic							
Skilled Trades - Other							
Machine Operators - Asphalt							
Machine Operators - Heavy Equipment							
Machine Operators - Other							
Truck Drivers							
General Labourers (e.g., material handlers, concrete mixer helper)							
Administrative (e.g., payroll, HR)							

**NOTE:** The 'Totals' value provided in row 1 column 1 should be equal to the total employment value provided in B1(A.).



**QUESTION B3**

**B3. Provide estimates of average earnings (as of the first week of September, 2009) for the following occupations. Enter either hourly or salary, whichever is most relevant for each occupational group.**

Occupation	Average Hourly	OR	Average Salary
Managers/Superintendents			
Supervisors/Foremen			
(Non-managerial) Engineers and Estimators			
Skilled Trades - Concrete finishers			
Skilled Trades - Heavy Duty Equipment Mechanic			
Skilled Trades - Other			
Machine Operators - Asphalt			
Machine Operators - Heavy Equipment			
Machine Operators - Other			
Truck Drivers			
General Labourers (e.g., material handlers, concrete mixer helper)			
Administrative (e.g., payroll, HR)			

**QUESTION B4**

**B4. Provide estimates of labour usage, by occupation, based on year 2008.**

Occupation	Required	Option 1 (Preferred)	Option 2	
	Total # Employed in 2008	Actual Total Hours Worked, 2008	Avg. Hours per Week, 2008	Avg. Weeks per Year, 2008
Managers/Superintendents				
Supervisors/Foremen				
(Non-managerial) Engineers and Estimators				
Skilled Trades - Concrete finishers				
Skilled Trades - Heavy Duty Equipment Mechanic				
Skilled Trades - Other				
Machine Operators - Asphalt				
Machine Operators - Heavy Equipment				
Machine Operators - Other				
Truck Drivers				
General Labourers (e.g., material handlers, concrete mixer helper)				
Administrative (e.g., payroll, HR)				
<b>Total</b>				

**NOTE:** If your company maintains information that allows you to generate actual total hours of paid work for each occupational group in 2008, as requested under Option 1, please provide this over Option 2. In the absence of this information, please attempt to provide estimates under the headings in Option 2. **Total # Employed in 2008** means the total number of paid individuals that worked, at least one hour, with your company over the course of 2008, which should equal the number of T4s issued.

**QUESTION B5**

**B5. Provide estimates of the number of employees that left your company in year 2008, not pertaining to retirement, layoff, fired, the end of the work season nor the end of a contract.**

	All Occupations	Manager Supervisor	Non-Manager, non-Supervisor
Total, Left Your Company			
Left the industry			
Remained in the industry, within the Maritimes			
Remained in the industry, left the Maritimes			

**NOTE:**

**Left the industry** includes: returning to school, injuries impairing return to work, deaths, a change of industry and any other type of permanent withdraw from the road building industry's labour pool. Whether they relocated or not is not a determining factor. **Remained in the industry, within the Maritimes** captures all those that left your company but are still working within the roading building industry in the Maritime provinces, which may or may not have involved a move. **Remained in the industry, left the Maritimes** captures all those that left your company but are still working in the roading building industry although outside the Maritime provinces; perhaps they moved to Ontario or Alberta



**QUESTION B6**

**B6. Provide estimates of actual retirements in 2008 and expected retirements over the next 5 years (2009-2013), by occupation.**

Occupation	Actual Retirements, 2008	Expected Retirements, 2009-13
<b>Total</b>		
Managers/Superintendents		
Supervisors/Foremen		
(Non-managerial) Engineers and Estimators		
Skilled Trades - Concrete finishers		
Skilled Trades – Heavy Duty Equipment Mechanic		
Skilled Trades – Other		
Machine Operators - Asphalt		
Machine Operators - Heavy Equipment		
Machine Operators - Other		
Truck Drivers		
General Labourers (e.g., material handlers, concrete mixer helper)		
Administrative (e.g., payroll, HR)		

**NOTE:** For the purpose of this study, **retirements** refer to those making a complete withdraw from the labour market; those retiring making only a partial withdraw, in terms of reduced working days or hours, are not to be included in the estimates. Those who completed the 2007 work season but retired before the start of the 2008 season, should be viewed as a 2008 retirement.

**QUESTION B7**

**B7. Select the statement that best describes your company’s employment situation compared to last year at this time?**

- (i) The number employed is down significantly (loss of -10% or more) \_\_\_\_\_
- (ii) The number employed is down slightly (-2 to -10%) \_\_\_\_\_
- (iii) The number employed is roughly the same (within +/- 2%) \_\_\_\_\_
- (iv) The number employed is up slightly (+2 to +10%) \_\_\_\_\_
- (v) The number employed is up significantly (more than +10%) \_\_\_\_\_

**QUESTION B8**

**B8. The following questions require the disclosure of company revenue information, which will be held in confidential by the consultant. This information is necessary to understand the relationship between expenditures on road work and labour requirements.**

**B8(A.) Total Company Revenue from Road/Bridge Work, 2008** \$ \_\_\_\_\_

**B8(B.) Percentage of Revenue by Source (Based on an Average Year):**

- (i) Road/Bridge Work and Supporting, **Public** Sector Contracts \_\_\_\_\_ %
- (ii) Road/Bridge Work and Supporting, **Private** Sector Contracts \_\_\_\_\_ %
- (iii) Other (e.g., sales of parts) \_\_\_\_\_ %

*Please specify on Other:* \_\_\_\_\_

**B8(C.) Percentage of Revenue by Source (Based on an Average Year):**

- (i) Awarded Tendered Contract Work \_\_\_\_\_ %
- (ii) Sub-Contract Work \_\_\_\_\_ %
- (iii) Other (e.g., sales of parts) \_\_\_\_\_ %

*Please specify on Other:* \_\_\_\_\_

**B8(D.) Percentage of Revenue by Location (Based on an Average Year):**

- (i) Nova Scotia Sourced \_\_\_\_\_ %
- (ii) Non-Nova Scotia Sourced \_\_\_\_\_ %



**Flip Chart Notes from March 1, 2010 Industry Forum**

Group 1 Responses	Group 2 Responses
<b>Q1) Discuss best practices and delivery options for training for the industry</b>	
<ul style="list-style-type: none"> <li>• Co-op approach</li> <li>• Job shadowing</li> <li>• Association funded training</li> <li>• High School courses               <ul style="list-style-type: none"> <li>○ WHMIS, Asphalt, elective</li> <li>○ Summer programs</li> <li>○ Building Futures (CANS)</li> </ul> </li> <li>• Industry Bursaries/Scholarships</li> <li>• Work with CANS</li> </ul>	<ul style="list-style-type: none"> <li>• Involve existing facility training (ie NSCC)</li> <li>• Timing/seasonality of training</li> <li>• On-the-job training</li> <li>• Use of technology (simulators)</li> <li>• Mentorship program (incentives)</li> <li>• Structured training programs (modules/accreditation)</li> <li>• Fairness &amp; consistency</li> <li>• Inclusiveness (literacy)</li> </ul>
<b>Q2) What can be done to strengthen the image of the industry and present it as a valid career path?</b>	
<ul style="list-style-type: none"> <li>• High School promotion</li> <li>• Standard courses               <ul style="list-style-type: none"> <li>○ Certificates</li> <li>○ Roadbuilder Trades</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Continue newspaper insert</li> <li>• Accreditation program</li> <li>• Externally focused tradeshow</li> <li>• High Schools               <ul style="list-style-type: none"> <li>○ OPP program</li> <li>○ Information session to guidance councillors</li> </ul> </li> <li>• Professional promotional material</li> </ul>
<b>Q3) Should the industry look at developing common standards for competencies for key occupations (e.g., managers/supervisors and HEO's)?</b>	
<ul style="list-style-type: none"> <li>• Gold Seal supported and rewarded</li> <li>• Certification of Road Building best practices</li> <li>• Use downtime to improve people (need work around for EI complications)               <ul style="list-style-type: none"> <li>○ EI should approve RB employability courses that they (EI) put on themselves</li> </ul> </li> <li>• Association can lobby for EI changes through CCA</li> </ul>	<ul style="list-style-type: none"> <li>• Apprenticeships</li> <li>• Accredited program</li> <li>• Establish standards</li> <li>• High School preparatory courses</li> <li>• Adapt to culture changes (youth work ethic)</li> <li>• Safety training</li> </ul>
<b>Q4) What would be the key elements of an attraction and retention strategy?</b>	
<ul style="list-style-type: none"> <li>• Promotion               <ul style="list-style-type: none"> <li>○ HS</li> <li>○ Online</li> </ul> </li> <li>• Retention               <ul style="list-style-type: none"> <li>○ Training</li> <li>○ Flexibility (older workers)</li> <li>○ Job Shadowing</li> <li>○ Companies have to buy-in / participate</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Income stability/benefits</li> <li>• Career development</li> <li>• Work/life balance</li> <li>• Consistent funding               <ul style="list-style-type: none"> <li>○ TIR 5 year capital plan</li> <li>○ Early tenders</li> </ul> </li> <li>• Employee recognition</li> <li>• Flexibility with senior workers</li> <li>• Succession planning for key equipment operators</li> </ul>



**Additional references for information cited in this paper are summarized below:**

*HSE Integrated* courses accredited towards Gold Seal Program

[http://www.goldsealcertification.com/education/courses/courses\\_e.asp?institution=HSE%20Integrated](http://www.goldsealcertification.com/education/courses/courses_e.asp?institution=HSE%20Integrated) as accessed December 11, 2009

*Nova Scotia Community College* courses accredited towards Gold Seal Program

[http://www.goldsealcertification.com/education/courses/courses\\_e.asp?institution=NSCC%20Nova%20Scotia%20Community%20College](http://www.goldsealcertification.com/education/courses/courses_e.asp?institution=NSCC%20Nova%20Scotia%20Community%20College) as accessed December 11, 2009

*Construction Sector Council Atlantic Construction Labour Market Symposium Report*,

June 4, 2009 [http://www.csc-ca.org/pdf/LMI\\_Symposium\\_Report\\_2009\\_Atlantic.pdf](http://www.csc-ca.org/pdf/LMI_Symposium_Report_2009_Atlantic.pdf) as accessed December 11, 2009

*Snowfighter Training Program Launched*, October 22, 2009

[http://www.rbanb.com/index\\_files/Snow%20Fighters%20Training%20Program%20News%20Release.pdf](http://www.rbanb.com/index_files/Snow%20Fighters%20Training%20Program%20News%20Release.pdf) as accessed December 22, 2009

*Memorandum of Understanding between New Brunswick Road Builders and Heavy*

*Construction Association and New Brunswick Community College*, September 15, 2009

[http://www.rbanb.com/index\\_files/Memo%20of%20Understanding%20signed%20with%20NBCC.pdf](http://www.rbanb.com/index_files/Memo%20of%20Understanding%20signed%20with%20NBCC.pdf) as accessed December 22, 2009

*NBCC – Miramichi Training Courses*,

<http://www.nbcc.ca/campuses/miramichi/continuinged/?cat=119> as accessed December 22, 2009

*Florida Transportation Technology Transfer Centre and the Centre for Transportation*

*Training*, <http://www.t2ctt.ce.ufl.edu/t2ctt/default.asp?SnID=2031867110> as accessed December 22, 2009.

*Annual Estimates of the Population of the United States July 1, 2009*, US Census Bureau

<http://www.census.gov/popest/states/NST-ann-est.html> as accessed December 23, 2009.

*Background Information on NSCC programming for Road Builders Association*, by Anne

Rodger, Nova Scotia Community College July 8, 2009.

*Roadbuilder Training in British Columbia* <http://www.roadbuilders.bc.ca/training.php> as

accessed on December 23, 2009.

