REVIEW PANEL DECISION
RR2-2012

Ratio Review for:
Hoisting Engineer: Mobile Crane Operator-Branch 1
Hoisting Engineer: Mobile Crane Operator-Branch 2
Hoisting Engineer: Tower Crane Operator

Submitted to: Board of Governors, Ontario College of Trades

Submitted by: Ratio Review Panel RR2-2012
## Contents

1. Introduction ................................................................. 2
2. The Review Process .......................................................... 2
3. Submissions Received ....................................................... 2
4. Criterion 1 – Scope of Practice of the Trade .......................... 3
5. Criterion 2 – Apprenticeship Program Established by the College 4
6. Criterion 3 – Journeyperson to Apprentice Ratio Effect on the Health and Safety of Apprentices, Journeypersons, and the Public ......................................................... 4
8. Criterion 5 – Economic Impact ............................................ 5
9. Criterion 6 – Number of Apprentices and Journeypersons Working in the Trade ......................................................... 5
10. Criterion 7 – Rates of Completion for Apprentice Training Program ............................................................ 5
11. Criterion 8 – Ratios in Other Jurisdictions ............................ 7
12. Criterion 9 – Supply and Demand for Journeypersons ............ 7
13. Criterion 10 – Attraction and Retention of Apprentices and Journeypersons ............................................................ 7
14. Criterion 11 – Average Age and Projected Attrition ................ 8
15. Conclusion ................................................................. 8
1 Introduction

This Ratio Review, RR2-2012, is being undertaken per Part IX of the Ontario College of Trades and Apprenticeship Act, 2009 ("OCTAA") and Ontario Regulation ("O. Reg.") 458/11. The Review Panel ("the Panel") members are: Bernard Fishbein (Chair), Wayne Lazzarato, and Scott McCoy. There are three Hoisting Engineer trades included in this Review. They are: Mobile Crane Operator-Branch 1, Mobile Crane Operator-Branch 2, and Tower Crane Operator. The current journeyperson-apprentice ratio for all three trades is 1:1.

2 The Review Process

The invitation for Written Submissions for RR2-2012 was publicized on April 3, 2012. The Written Submission deadline was May 18 and all submissions were posted on the Ontario College of Trades ("OCOT" or "the College") website on May 23. On May 28, information about the location, date and time of the Oral Consultation was provided to the party who made a request to make an oral submission and posted to the OCOT website on May 29. The Oral Consultation was held on June 5, 2012.

O. Reg. 458/11 stipulates that the Review Panel shall review the written and oral submissions against the following criteria in determining the appropriate journeyperson to apprentice ratio for these trades:

i/ The scope of practice of the trade.

ii/ The apprenticeship program established by the College.

iii/ How the journeyperson to apprentice ratio for the trade may affect the health and safety of apprentices and journeypersons working in the trade and the public who may be affected by the work.

iv/ The effect, if any, of the journeyperson to apprentice ratio of the trade on the environment.

v/ The economic impact of the journeyperson to apprentice ratio of the trade on apprentices, journeypersons, employers and employer associations and, where applicable, on trade unions, employee associations, apprentice training providers and the public.

vi/ The number of apprentices and journeypersons working in the trade.

vii/ The rates of completion for apprentices in an apprentice training program for the trade.

viii/ The journeyperson to apprentice ratio, if any, for a similar trade in other jurisdictions.

ix/ The supply of, and demand for, journeypersons in the trade and in the labour market generally.

x/ The attraction and retention of apprentices and journeypersons in the trade.

xi/ The average age of apprentices and journeypersons in the trade and the projected attrition of journeypersons working in the trade.

3 Submissions Received

The only Written Submission was received from the International Union of Operating Engineers ("IUOE")
Local 793, which submission was also endorsed by the Operating Engineers Training Institute of Ontario ("the Training Institute") and the Hoisting Engineers Trade Board of OCOT ("the Trade Board"). IUOE Local 793 is the provincial trade union local for heavy equipment operators, representing over 12,000 operators working in the construction and industrial sectors in the province of Ontario. The Training Institute provides training for various classifications of trades including the hoisting engineers. The Training Institute is funded by the IUOE Local 793 Training Fund comprised of employer and union trustees. Both campuses, located in Morrisburg and Oakville, are approved Training Delivery Agents ("TDA") by the Ministry of Training, Colleges and Universities ("MTCU"). The Training Institute’s crane training campus is the only approved Demonstration of Skills Test ("DOST") in Ontario. The Trade Board was established under OCTAA and is comprised of six members with equal employer and employee representation. IUOE Local 793, the Training Institute, and the Trade Board will hereafter be referred to as "the Parties".

A representative of IUOE Local 793 provided the oral submission on behalf of the Parties on June 5, 2012.

The Panel’s assessment of the written and oral submissions is outlined below with respect to each of the eleven criteria. The final section, Conclusion, contains the Panel’s decision on the matter of this Ratio Review.

4 Criterion 1 – Scope of Practice of the Trade

The applicable scope of practice for the three trades covered by this Review are set out in O.Reg. 275/11 “Scope of Practice – Trades in the Construction Sector”. The difference between the two types of mobile crane operators turns on the weight of material being lifted. Mobile crane operator 1 includes maintaining and operating mobile cranes that are capable of raising, lowering or moving any material that weighs more than 16,000 pounds. Mobile crane operator 2 includes maintaining and operating mobile cranes that are capable of raising, lowering or moving only material that weighs more than 16,000 pounds but no more than 30,000 pounds.

Hoisting Engineer - Mobile Crane Operator (Branch 1)

21. (1) The scope of practice for the trade of hoisting engineer — mobile crane operator 1 includes maintaining and operating mobile cranes that are capable of raising, lowering or moving any material that weighs more than 16,000 pounds.

(2) For the purposes of this section and section 22, “mobile crane” means a mechanical device or structure that incorporates a boom that,

(a) is capable of moving in the vertical and horizontal plane,

(b) is capable of raising, lowering or moving a load suspended from the boom by a hook or rope, and

(c) is mounted on a mobile base or chassis,

and includes a telescoping or articulated boom but does not include equipment that is used exclusively for fire-fighting or by automotive wreckers and tow trucks to clear wrecks and haul vehicles.

RR2-2012 - Hoisting Engineers- Ratio Review Panel Decision 3
Hoisting Engineer - Mobile Crane Operator (Branch 2)

22. The scope of practice for the trade of hoisting engineer — mobile crane operator 2 includes maintaining and operating mobile cranes that are capable of raising, lowering or moving only material that weighs more than 16,000 pounds but no more than 30,000 pounds.

Hoisting Engineer - Tower Crane Operator

23. (1) The scope of practice for the trade of hoisting engineer — tower crane operator includes maintaining and operating tower cranes.

(2) In this section, “tower crane” means a mechanical device or structure that is of the travelling, fixed or climbing type and that has,

(a) a boom, power driven drum and wire rope to raise, lower or move material, and

(b) a vertical mast or tower and jib.

5 Criterion 2 – Apprenticeship Program Established by the College

The College has not yet established its own apprenticeship programs for these trades but the existing standards of MTCU are still in effect:

- 339A - Mobile Crane Operator: 6,000 hour apprenticeship including 480 hours of in-school training (4 levels)
- 339C - Mobile Crane Operator, up to and including 15 Tons: 1,000 hour apprenticeship including 240 hours of in-school training (1 level)
- 339B - Tower Crane Operator: 3,000 hour apprenticeship including 360 hours of in-school training (3 levels)

Apprentices in all three trades covered in this Review are required to complete an MTCU trade exam at the end of their apprenticeship. A minimum score of 70% is required. As well, Mobile Crane Operator - Branch 1 is an Interprovincial Red Seal Trade, a designation recognized across Canada.

6 Criterion 3 – Journeyperson to Apprentice Ratio Effect on the Health and Safety of Apprentices, Journeypersons, and the Public

The Parties asserted that the existing 1:1 ratio should be maintained to ensure the continuing health and safety on Ontario construction sites as well as to the public at large. The Panel agrees.

The Parties pointed to the fact that accident rates remain low and that for the years 1969-2004, after the implementation of compulsory training, crane and rigging related fatalities expressed as a percentage of total construction fatalities dropped from 19.8% to less than 5%. Obviously, there is an inherent safety risk in the operation of these types and sizes of cranes. Not only is there a risk in their operation but they operate in a vast array of environments involving high rise construction, close proximity to other buildings, utilities, the general public, and operation within particular industrial contexts where environmental and enhanced safety concerns may be at play. A key to preventing catastrophic accidents is ensuring crane operators learn to operate safely and with full knowledge of the multitude of tasks they undertake on a daily basis. Supervision by a single experienced licensed

---


RR2-2012 - Hoisting Engineers- Ratio Review Panel Decision
journeyperson will assist the apprentice in gaining the required skills to become a safe and effective operator. Lastly, the continuation of a 1:1 ratio has been supported by industry stakeholders (including the former Provincial Advisory Committee ("PAC") as well as the Trade Board) on a health and safety basis.

7 Criterion 4 – Effect on the Environment
Environmental risks are addressed not only through compliance with environmental regulations but also with the pre-operational inspection and monitoring of the equipment. This is all enhanced by the continuation of a 1:1 ratio. This is particularly important because the consequences of an accident or an improperly executed lift by a crane operator can be very significant. Accordingly, the potential environmental impact dictates the continuation of a 1:1 ratio.

8 Criterion 5 – Economic Impact
Other than the Trade Board, no employer group or any group of which employers form a part, made any submission about any adverse economic impact of the existing ratio or continuing it. The Parties submitted that the ratio should continue to be determined on a "long term approach" rather than reacting to short term labour or supply shortages (which in any event they do not concede exist). The Parties asserted that to do otherwise would not only jeopardize safety but might promote reactive ratio calculations. Moreover, since the number of cranes needed (and therefore the output) will not change, there is no immediate productivity increase to be garnered from increasing the number of apprentices. There appears to be no negative economic impact from continuing the current ratio.

9 Criterion 6 – Number of Apprentices and Journeypersons Working in the Trade
As illustrated in the chart below, there appears to be no shortages of apprentices and journeypersons caused by the current ratio of 1:1, nor does it appear that any will be created by continuing it.

<table>
<thead>
<tr>
<th>Mobile Crane Operator-339 A; Branch 1</th>
<th>Mobile Crane Operator-339 C; Branch 2</th>
<th>Tower Crane Operator- 339 B; Branch 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Journeypersons</td>
<td>3,166</td>
<td>1,212</td>
</tr>
<tr>
<td>Active Apprentices</td>
<td>349</td>
<td>129</td>
</tr>
<tr>
<td></td>
<td></td>
<td>107</td>
</tr>
</tbody>
</table>

10 Criterion 7 – Rates of Completion for Apprentice Training Program
The Parties provided MTCU statistics about the number of Certificates of Qualification ("C of Q") issued. This information is outlined in the following tables

---

2 Statistics provided by MTCU. Data as of May 8, 2012

RR2-2012 - Hoisting Engineers- Ratio Review Panel Decision
### 339A Hoisting Engineer Mobile Crane Op Br1

<table>
<thead>
<tr>
<th></th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Registrations</td>
<td>105</td>
<td>85</td>
<td>59</td>
<td>82</td>
<td>106</td>
<td>437</td>
</tr>
<tr>
<td>CoFQs Issued to Apprentices</td>
<td>74</td>
<td>66</td>
<td>60</td>
<td>50</td>
<td>70</td>
<td>320</td>
</tr>
<tr>
<td>CoFQs Issued to Challengers</td>
<td>17</td>
<td>9</td>
<td>12</td>
<td>19</td>
<td>12</td>
<td>69</td>
</tr>
<tr>
<td>Average Age of Journeypersons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>53</td>
</tr>
<tr>
<td>Average Age of Apprentices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Active Journeypersons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>As of Apr 2, 2012: 3,166</td>
</tr>
<tr>
<td>Active Apprentices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>As of Apr 2, 2012: 349</td>
</tr>
</tbody>
</table>

### 339B Hoisting Engineer Tower Crane

<table>
<thead>
<tr>
<th></th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Registrations</td>
<td>22</td>
<td>45</td>
<td>18</td>
<td>28</td>
<td>54</td>
<td>167</td>
</tr>
<tr>
<td>CoFQs Issued to Apprentices</td>
<td>20</td>
<td>29</td>
<td>29</td>
<td>18</td>
<td>16</td>
<td>112</td>
</tr>
<tr>
<td>CoFQs Issued to Challengers</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>11</td>
<td>34</td>
</tr>
<tr>
<td>Average Age of Journeypersons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>Average Age of Apprentices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Active Journeypersons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>As of Apr 2, 2012: 1,150</td>
</tr>
<tr>
<td>Active Apprentices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>As of Apr 2, 2012: 107</td>
</tr>
</tbody>
</table>

### 339C Hoisting Engineer Mobile Crane, Branch 2

<table>
<thead>
<tr>
<th></th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Registrations</td>
<td>24</td>
<td>21</td>
<td>39</td>
<td>24</td>
<td>28</td>
<td>136</td>
</tr>
<tr>
<td>CoFQs Issued to Apprentices</td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>10</td>
<td>39</td>
</tr>
<tr>
<td>CoFQs Issued to Challengers</td>
<td>35</td>
<td>63</td>
<td>46</td>
<td>34</td>
<td>28</td>
<td>206</td>
</tr>
<tr>
<td>Average Age of Journeypersons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Average Age of Apprentices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Active Journeypersons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>As of Apr 2, 2012: 1,212</td>
</tr>
<tr>
<td>Active Apprentices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>As of Apr 2, 2012: 129</td>
</tr>
</tbody>
</table>
The Training Institute used the information shown in these tables to provide a weighted average of 92% of apprentices who complete their apprenticeship for all three hoisting engineer trades. The specific breakdown is as follows:

<table>
<thead>
<tr>
<th>Mobile Crane Operator-339 A; Branch 1</th>
<th>Mobile Crane Operator-339 C; Branch 2</th>
<th>Tower Crane Operator-339 B; Branch 3</th>
<th>Average for 339A, 339B, and 339C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion Rate</td>
<td>91.5%</td>
<td>66.7%</td>
<td>95.5%</td>
</tr>
</tbody>
</table>

As can be seen the weighted average is diminished by the fact that fewer apprentices pursue and complete Mobile Crane Operator - Branch 2 (because more and more cranes today are of a higher capacity than the limit on this license), and transfer into the training for the other branches. As a result, the weighted completion average could be even higher. Accordingly, the rates of completion do not indicate that there is any need to discontinue or change the existing ratio of 1:1.

11 Criterion 8 – Ratios in Other Jurisdictions
It appears that most other provincial jurisdictions where ratios are regulated also call for a 1:1 ratio for the hoisting engineer trades. This is not without exception, however, as there appears to be supply and demand issues in other jurisdictions which have either driven the increase of the ratio (eg, Alberta), or the elimination of the ratio altogether (British Columbia). However, there does not appear to be any supply and demand issues in Ontario. Certainly, the Panel received no submissions urging that this should lead to changing the 1:1 ratio.

12 Criterion 9 – Supply and Demand for Journeypersons
It appears, and the Parties asserted, that the supply and demand for journeypersons in the three trades are in balance. Leaving aside the Parties’ assertion that the priority in determining the ratio should be given to risk and safety factors and not market economics, the Panel received no submissions indicating that there are market problems at all. The Parties pointed to their own economic data and reports indicating that the market is in balance, and the Panel sees no evidence to the contrary that suggests altering the current ratio.

13 Criterion 10 – Attraction and Retention of Apprentices and Journeypersons
The Parties referenced the targeted recruitment strategies of IUOE Local 793 to attract new apprentices through each of its 13 area offices across the province. As well, the Training Institute attends career fairs and trade shows to promote, amongst others, these Hoisting Engineer trades with a special focus on under-served populations such as aboriginal and female youth. In any event, neither Local 793 nor the Training Institute has experienced any difficulty in attracting young people into the field. Currently, there are approximately 60 mobile and tower crane apprentices waiting to begin their in-school training. As well, there are over 100 applications awaiting approval for enrolment into an apprenticeship program. Apprenticeship retention through completion has remained high since employment prospects have remained positive. IUOE Local 793 reports that working hours in the last year were at an all-time
high. Accordingly, on the basis of this criterion, there appears to be no issue which precludes the continuation of the current ratio.

14 Criterion 11 – Average Age and Projected Attrition
The average apprentice and journeyperson ages according to the MTCU⁴ are:

<table>
<thead>
<tr>
<th></th>
<th>Mobile Crane Operator-339 A; Branch 1</th>
<th>Mobile Crane Operator-339 C; Branch 2</th>
<th>Tower Crane Operator- 339 B; Branch 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age Apprentice</td>
<td>33</td>
<td>36</td>
<td>31</td>
</tr>
<tr>
<td>Average Age Journeyperson</td>
<td>53</td>
<td>50</td>
<td>58</td>
</tr>
</tbody>
</table>

It is difficult to predict the projected attrition rates as there is wide variability in terms of when journeypersons choose to start a pension, particularly in these economically uncertain times. As indicated in the Panel’s comments on criterion 10, there does not appear to be a problem attracting new apprentices. Accordingly, there appears to be no issue in this criterion that precludes the continuation of the ratio.

15 Conclusion
Accordingly, the Panel accepts the written and oral submissions of the Parties and concludes that the current 1:1 journeyperson to apprentice ratio should be maintained. It is the view of the Panel that the 1:1 ratio will continue to provide the optimal degree of training and transfer of knowledge. Any changes may negatively impact health and safety (and consequently the environment) by possibly increasing job site accidents. Local supply and demand needs, including attracting and retaining apprentices, appear to be met. Equally important, the Panel received no objections from employer groups, other unions, or individuals, about the existing ratio. Therefore, there appears to be no justification for changing the existing 1:1 ratio and the decision of the Panel is that it should be continued.

******************************************************************************

Signed: Bernard Fishbein
Chair, Ratio Review Panel RR2-2012 (Hoisting Engineers)

Date: July 16, 2012

⁴ Statistics provided by MTCU. Data as of May 8, 2012
RR2-2012 - Hoisting Engineers- Ratio Review Panel Decision