

# Skilled Trades in Demand for Brantford, Brant & Six Nations

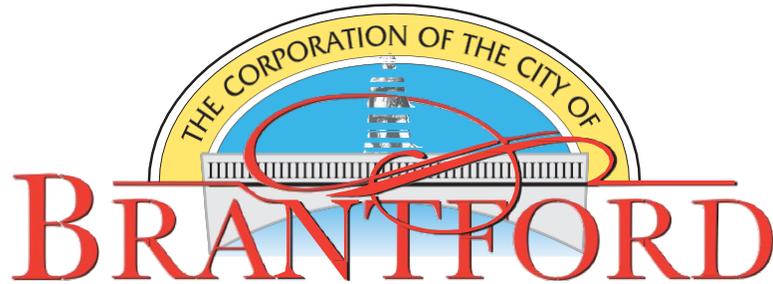
Prepared by: Grand Valley Educational Society



*“Dedicated to the expansion and enhancement of post-secondary education in  
Brantford, Brant & Six Nations”*

December, 2016

The Grand Valley Educational Society, on behalf of the Skilled Trades Alliance, would like to express our sincere appreciation to the following sponsors for their financial support in the development of this report:



# Enterprise Brant

*A Community Futures Development Corporation*

## The Skilled Trades Alliance:

The lack of local and accessible skilled trades' training prompted a group of community stakeholders including: trainers; secondary and post-secondary educators; all levels of government; area business and industry; trade association representatives; employment support services and; organizations and associations focused on labour force development to collaborate on the impact this gap will have on the future growth and sustainability of the Brantford, Brant & Six Nations communities.

The mission of the Skilled Trades Alliance is to create a sustainable Trades, Apprenticeship & Skills Training network in Brantford-Brant-Six Nations. The goals of the Alliance include:

- Champion initiatives that will help build a Skilled Trades & Apprenticeship workforce that supports the regions current and future business growth and increases employment opportunities for our citizens;
- Create a Trades, Apprenticeship & Skills Training community network that will actively promote and increase awareness of the local opportunities, in addition to the evolving requirements of advanced Trades, Apprenticeship & Skills Training.

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## Summary

Based on 157 valid and complete responses from business enterprises in the Brantford-Brant-Six Nations regions, the top priority skilled trades are, in order:

- Welder
- Electrician
- Machinist
- Millwright

It is important to note that the number of responses received is only an indication of the critical demand of the skilled trades in the geographic regions mentioned. The greatest number of responses were received from the industrial sector, followed by motive power and construction, respectively.

Regardless of the industry sector contacted, it is unanimous that the lack of a qualified and skilled workforce is having a detrimental impact on business enterprises and has resulted in increased business costs and the inability to grow and expand the product or service of the business.

For example; it is reasonable to extrapolate that although the need for Electricians is identified primarily by the industrial sector, unfortunately, during data collection the project facilitator encountered difficulties in sourcing information from the construction sector. The inability to obtain input from the construction sector (due to an extremely busy time of year in construction), does not imply that their need for Electricians is any less critical.

It would also be reasonable to extrapolate that there are substantially more positions available than indicated in this report for each of the skilled trades, as the report does not include input from *all* companies that would or could utilize the service and skills of the particular trade.

Employer participation in employee development is strong - participation in apprenticeships ranges from 50% - 66% depending on the sector and the level of priority. Employers are investing substantial resources in training their employees – training that is focused on the unique requirements of the company and their product or service. There is a strong indication of a willingness and desire to develop from within for employees who have demonstrated both interest and aptitude for skilled positions. What was stressed by employers is that a strong existing skill base of applied knowledge and skills, allows the employer to expand and enhance the employees' skill to meet unique business requirements and, is instrumental in assisting an individual in progressing and advancing within the company at an accelerated rate.

Survey and forum input indicates that employers believe that improving the perception and awareness of skilled trades is equally as important as the training. Increased awareness of the trades throughout all levels of education, acknowledging the trades are post-secondary education, appreciating the need for applied mathematics and applied skills, being aware of the substantial opportunities and, understanding the evolution of skilled trades particularly for advanced manufacturing are key to the success of encouraging youth to pursue skilled trades as a career path.

## Purpose

The Skilled Trades Alliance determined that a critical strategic priority was to capture information from local and area employers in the construction, industrial and motive power sectors to identify those skilled trades that are in greatest demand.

Data collection methods were developed to capture current information that would reflect local employer needs relating to skilled trades in addition to their projected recruitment needs for those skilled trades identified as a priority.

In addition to high demand skilled trades occupations, survey questions were designed to capture data that would also reflect:

1. Trades that employers are experiencing the most difficulty in recruitment and retention, both for apprentices and journey people;
2. Hiring intentions over the next three years for journeypersons and apprentices;
3. The number of employers currently participating or have never participated in apprenticeship training.

## Parameters

The following parameters were applied to the gathering of data for this report:

### Geographic Region:

“Local” refers to the geographic region or communities of Brantford-Brant-Six Nations.

### Skilled Trades Definition:

*A worker that specializes in a particular trade of craft requiring specialized skill.*

Under this definition, skilled trades identified in the data are not restricted to voluntary or compulsory apprenticeable trades governed by the Ontario College of Trades (OCOT)

### Sectors:

Using OCOT sectors as reference, this report focuses on three of the potential four sectors governed by OCOT – industrial, motive power and construction. The service industry was not included as part of the survey or data.

### Valid and Complete Response:

To be categorized as a valid and complete response, the following three (3) criterion had to be met:

1. Respondent, company name and, a valid email address were provided (mandatory fields)
2. Respondents primary business activity is in industrial, construction or motive power sectors
3. The respondent identified a minimum of 1 (one) priority skilled trade

## Methodology

Data collection was accomplished through:

1. Employer forums
2. On-site employer interviews
3. Telephone interviews
4. On-line surveys

For consistency in data collection, a survey was designed and used as the foundation for all data collection methods (Appendix A).

### 1. Employer forums

A series of 7 (seven) employer forums were scheduled: one for motive power, three for industrial and; three for the construction industry.

Forum venues were held in Brantford, Brant County and Six Nations with the support of:

- Brantford Visitor and Tourism Centre
- Corporation of the County of Brant – Economic Development & Strategic Investments Department
- Six Nations of the Grand River Development Corporation

Invitations to local employers were extended by means of electronic broadcasts and newsletters by members of the Skilled Trades Alliance, newspaper print and social media ads and, personal invitations by telephone and on-site delivery.

### 2. On-site employer interviews

During the delivery of the invitations, multiple employers opted to meet with the project facilitators and complete the survey on-site.

### 3. Telephone interviews

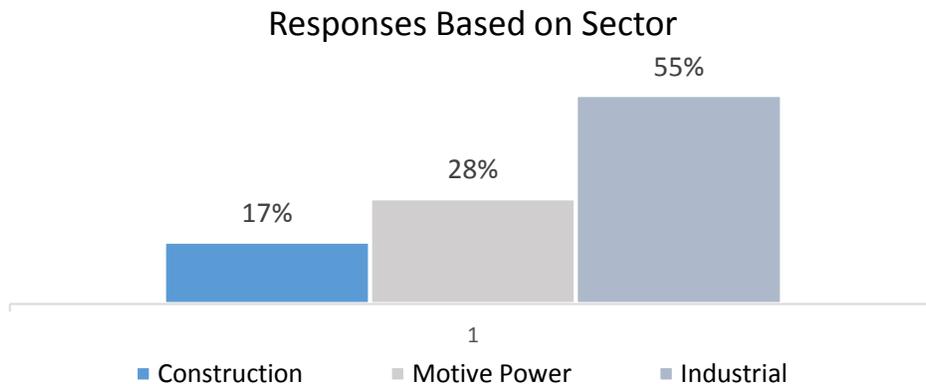
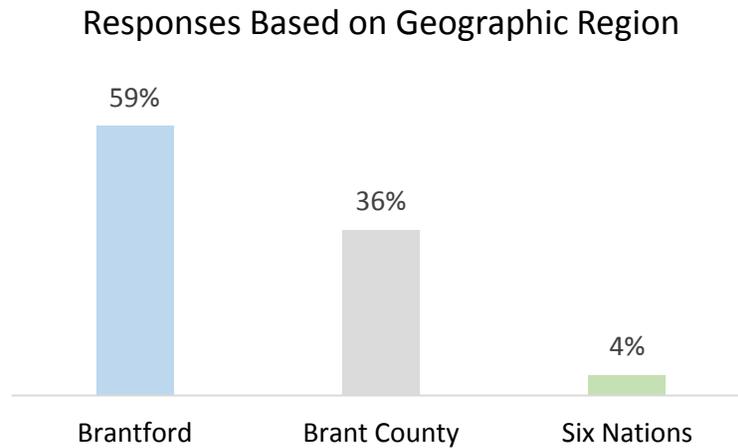
Utilizing local industrial and business directories, employers were contacted by the project facilitators and asked to participate in the survey by one of the following means: employer forums, on-line survey, on-site survey or via telephone.

### 4. On-line surveys

As a result of employer forums, electronic broadcasts, newspaper print, social media ads and telephone contact, employers could opt to complete the survey on-line.

## Results

The data represented in the report reflects 157 valid and complete responses. Of these 157 responses:



Respondents were provided with the opportunity to indicate up to three priority skilled trades to support their business enterprises. As identifying a minimum of one priority skilled trade was mandatory to be considered a valid and complete survey, the data also reflects:

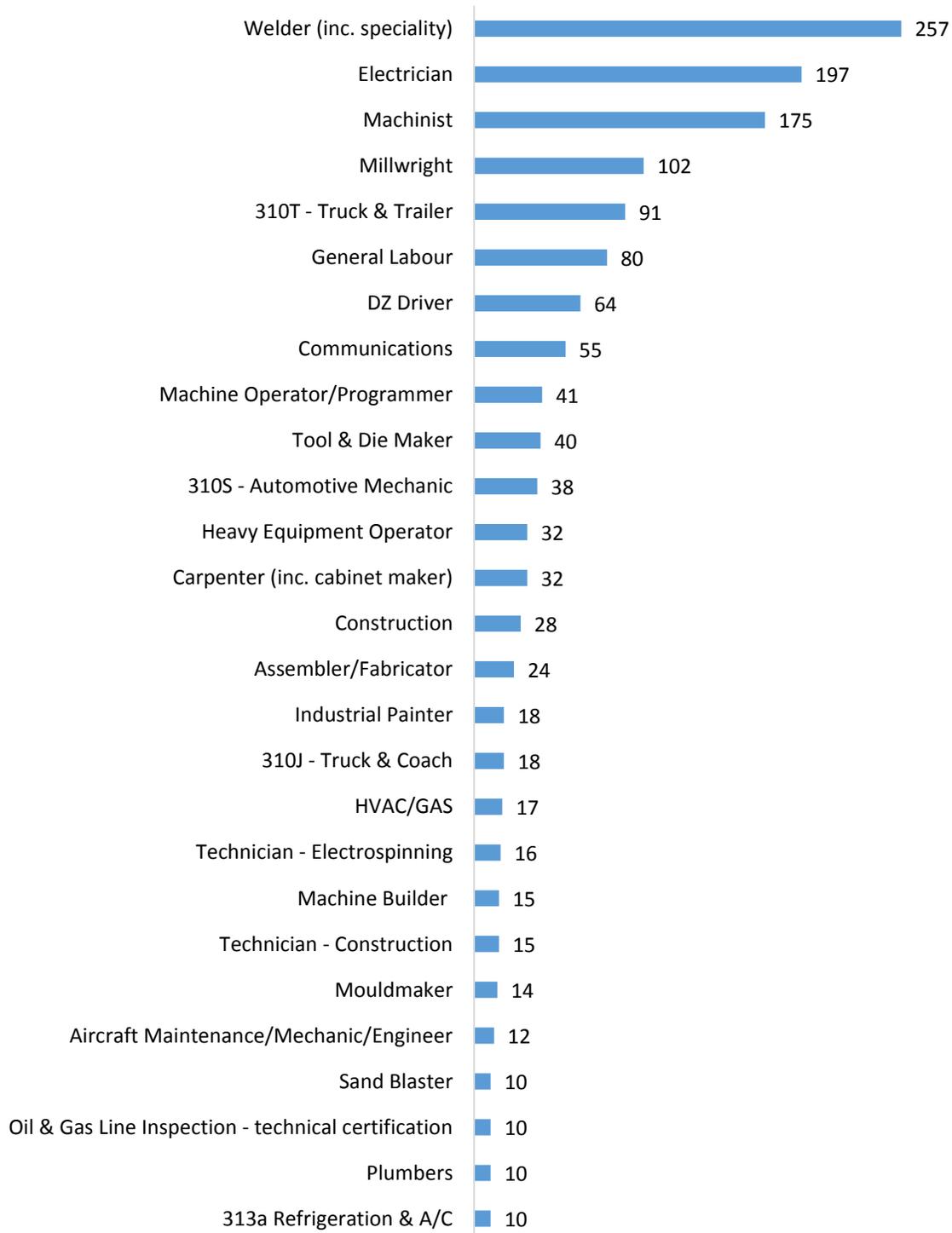
- 69% of respondents indicated two priority trades to support their business
- 28% of respondents indicated three priority trades to support their business

The industrial sector had the greatest number of responses indicating multiple priority trade needs, followed by the construction and then motive power sectors.

## Priority Skilled Trades

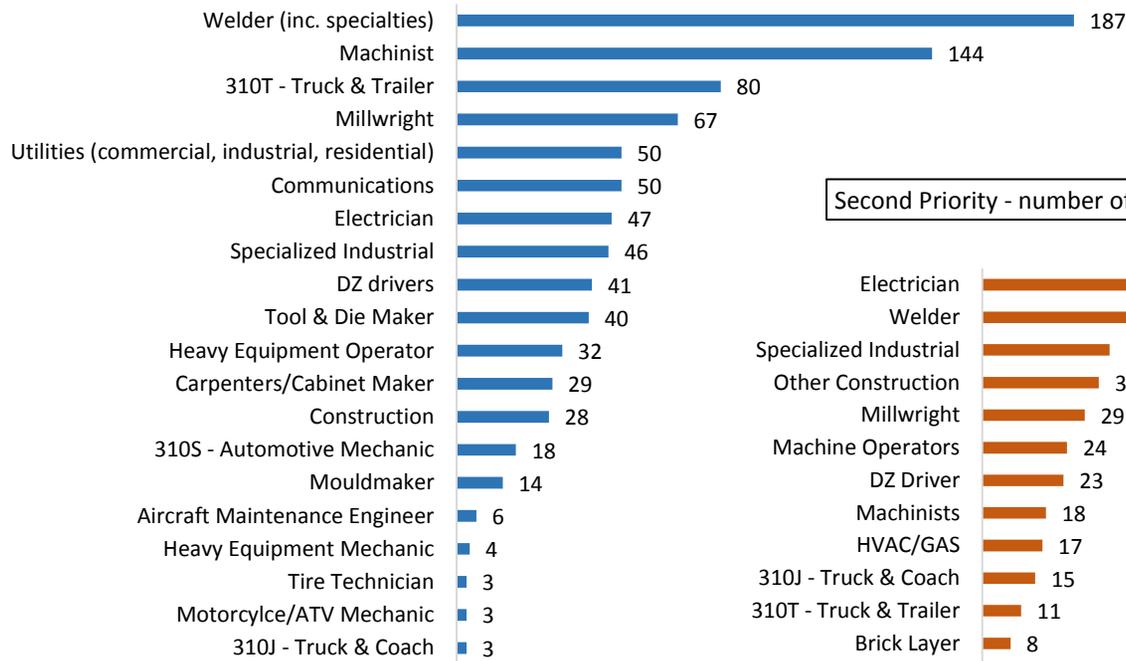
To determine the highest priority skilled trade, responses from all three regions and all three priorities were collated to reflect the greatest number of job openings both current and projected over the next three years. The following represents a summary of job openings that were equal to or greater than ten and included both journeypersons and apprentices.

### All Trade Priorities indicating =>10 job openings

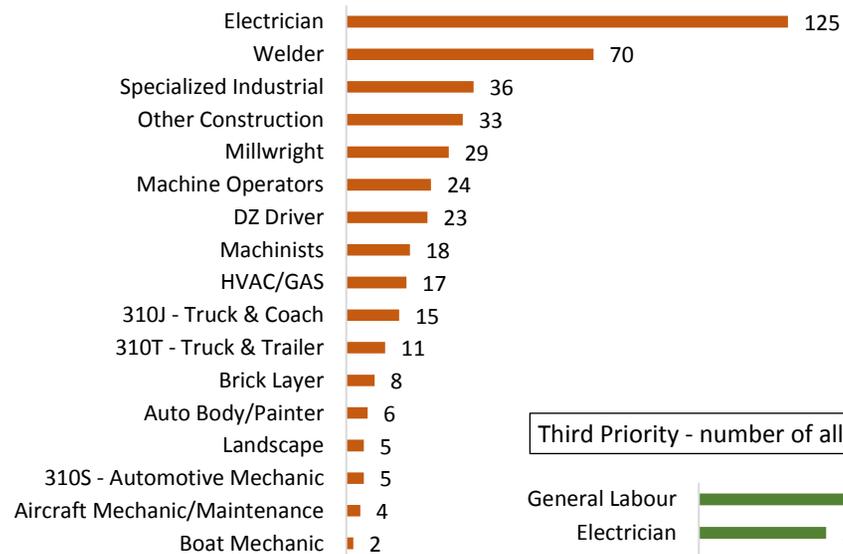


Respondents were provided with the opportunity to identify up to three priority skilled trades required to support their business. The following summarizes the responses for each priority based on employment projections for both journeypersons and apprentices.

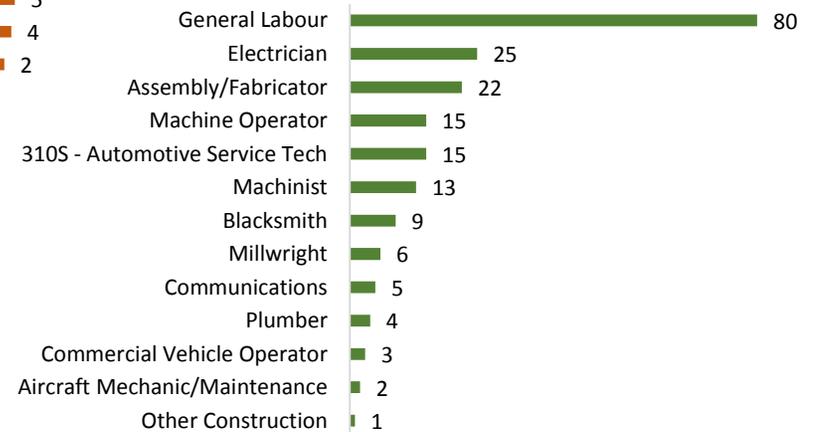
Top Priority - number of all available positions



Second Priority - number of all available positions



Third Priority - number of all available positions



## Employment Opportunities vs. Number of Responses

A combination of total job openings was evaluated against the total number of respondents indicating that the skilled trade was one of their top three priorities. The following indicates that the top skilled trades had the greatest number in both categories.

|                                                     | # of responses | Total Openings |
|-----------------------------------------------------|----------------|----------------|
| Welder (inc. specialty)                             | 36             | 257            |
| Electrician                                         | 31             | 197            |
| Machinist                                           | 37             | 175            |
| Millwright                                          | 41             | 102            |
| 310T - Truck & Trailer                              | 21             | 91             |
| General Labour                                      | 1              | 80             |
| DZ Driver                                           | 7              | 64             |
| Communications                                      | 4              | 55             |
| Machine Operator/Programmer                         | 14             | 41             |
| Tool & Die Maker                                    | 6              | 42             |
| 310S - Automotive Mechanic                          | 13             | 38             |
| Carpenter (inc. cabinet maker)                      | 7              | 32             |
| Heavy Equipment Operator                            | 5              | 32             |
| Construction                                        | 5              | 28             |
| Assembler/Fabricator                                | 4              | 24             |
| 310J - Truck & Coach                                | 5              | 18             |
| Industrial Painter                                  | 3              | 18             |
| HVAC/GAS                                            | 6              | 17             |
| Technician - Electrospinning                        | 1              | 16             |
| Technician - Construction                           | 1              | 15             |
| Machine Builder                                     | 1              | 15             |
| Mouldmaker                                          | 4              | 14             |
| Aircraft Maintenance/Mechanic/Engineer              | 6              | 12             |
| 313a Refrigeration & A/C                            | 1              | 10             |
| Plumbers                                            | 1              | 10             |
| Oil & Gas Line Inspection - technical certification | 1              | 10             |
| Sand Blaster                                        | 1              | 10             |
| Gas Fitters/Technicians                             | 3              | 9              |
| Blacksmith                                          | 1              | 9              |
| Design Draftsperson                                 | 3              | 8              |
| Brick Layer                                         | 1              | 8              |
| Auto Body/Painter                                   | 3              | 6              |
| HRVAC/HVAC & Controls (combination)                 | 3              | 6              |
| Technician - Power Lift Truck                       | 1              | 6              |
| Landscape                                           | 2              | 5              |
| Technician - Powerline                              | 1              | 5              |
| Eavestrough/Siding Installers                       | 1              | 5              |
| Mechanical Engineers                                | 1              | 5              |
| Plumber                                             | 5              | 4              |
| Heavy Equipment Mechanic                            | 3              | 4              |
| Commercial Vehicle Operation                        | 2              | 3              |
| Motorcycle/ATV Mechanic                             | 2              | 3              |
| Tire Technician                                     | 1              | 3              |
| Foundry Man                                         | 1              | 3              |
| Boat Mechanic                                       | 1              | 2              |
| Technician - Hydraulic                              | 1              | 2              |
| Technician - Compressor                             | 1              | 2              |
| Grinding                                            | 1              | 2              |

## Top Four Priorities

Based on 157 valid and complete responses from business enterprises in the Brantford-Brant-Six Nations regions, the top priority skilled trades in order are:

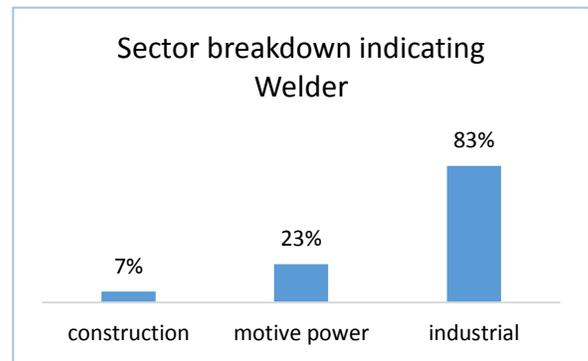
- Welder
- Electrician
- Machinist
- Millwright

Due to the complexity and potential variations associated with these four trades, further review of the data was completed to refine and define any specifics indicated by business and industry respondents.

## Welder

Job descriptions indicated in the survey include:

- Welder-fitter
- Welder-fabricator
- Welder-fitter-fabricator
- Welder-casting
- Welder-hydraulics
- Braziers
- Structural Welder



Other key points indicated by respondents:

- Fine detailed work
- Required for major expansion (multiple responses)
- Unable to take on work due to lack of skilled welders
- Company will assist new hires in obtaining CWB ticket
- Welders are promoted from within to welder-fitter
- Experience in SMAW/FCAW/TIG Welding - CWB Ticket Fitting and welding

The most critical requirement indicated by employers is the ability to work with various metals and metal alloys:

- Aluminum
- Carbon alloy
- Carbon metal
- Copper
- Galvanized
- Plastics
- Stainless steel
- Steel (multiple types and multiple gauges of steel)
- White, Grey, Ductile iron

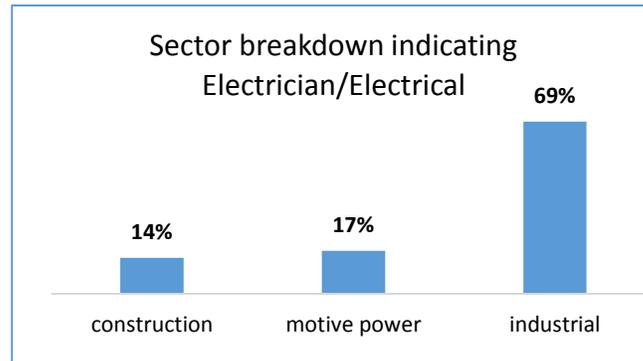
For current and three year projected job openings for Welders respondents indicated:

|                                         | journeyperson | apprentice |
|-----------------------------------------|---------------|------------|
| priority one                            | 147           | 40         |
| priority two                            | 43            | 27         |
| <i>current &amp; projected openings</i> | 187           | 70         |
| Total Openings                          |               | 257        |

## Electrician

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Details regarding Electricians are very specialized to each sector and often indicated skill combinations.



### Construction

- Difficult to recruit Electricians who are willing do to Tower Crane heights

### Motive Power

- Electric motor repair trade
- Very difficult to find qualified employees with strong knowledge and skills in electrical and mechanical troubleshooting and rebuilding skills
- No formal training for electric motor repair offered anywhere in Ontario (one program in Alberta)
- Electricians for hybrid vehicles

### Industrial

- Electrical with strong knowledge of PLC programming and diagnostics
- Electrical/Millwright
- Electrical/HVAC
- Electrical/Refrigeration
- Electrical/Sales

For current and three year projected job openings for Electricians respondents indicated:

|                                         | journeyperson | apprentice |
|-----------------------------------------|---------------|------------|
| priority one                            | 25            | 22         |
| priority two                            | 73            | 52         |
| priority three                          | 10            | 15         |
| <i>current &amp; projected openings</i> | 108           | 89         |
| <b>Total Openings</b>                   |               | <b>197</b> |

## Machinist

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**100% of the requirements for Machinist is in the industrial sector.**

Job Descriptions indicated in the survey include:

- CNC Operator/Programmer
- CNC/Manual machining
- Machinist - Tool & Die
- General Machinist
- Industrial Machinist
- CNC Sheet Metal

Specific skills sets indicated include:

- Lasers
- Turret presses
- Custom machining work
- Metal fabrication
- Steel and aluminum
- Cylinder machining
- Injection moulding

Other key points indicated by respondents:

- Training at Colleges is on outdated machines
- Graduates are not able to achieve extremely narrow and specific tolerances
- Lack of skills and experience in automation
- Negative business impacts:
  - Unable to expand due to lack of skilled candidates
  - Turning away work / Hampering business growth
  - Production and recruiting efforts are being shifted to Europe
  - Hindering production schedule

For current and three year projected job openings for Machinists respondents indicated:

|                                         | journeyperson | apprentice |
|-----------------------------------------|---------------|------------|
| priority one                            | 72            | 70         |
| priority two                            | 13            | 5          |
| priority three                          | 7             | 8          |
| <i>current &amp; projected openings</i> | 92            | 83         |
| Total Openings                          |               | 175        |

## Millwright

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**100% of the requirements for Millwright is in the industrial sector.**

Job Descriptions indicated in the survey include:

- Millwright-electrician
- Millwright-HVAC
- Millwright-machinist
- Millwright-maintenance
- Millwright-maintenance-machinist
- Millwright-refrigeration
- Millwright-rigger
- Millwright-welder

Specific skills sets indicated include:

- Hydraulics
- Pneumatics
- Gold Seal level of certification
- Red Seal level of certification

Other key points indicated by respondents:

- C of Q preparatory training required
- Developed and promoted from within – 100% success rate with apprenticeships
- Journeyman with multiple tickets for service calls

For current and three year projected job openings for Millwright, respondents indicated the need for:

|                              | journeyman | apprentice |
|------------------------------|------------|------------|
| priority one                 | 40         | 27         |
| priority two                 | 17         | 12         |
| priority three               | 2          | 4          |
| current & projected openings | 59         | 43         |
| Total Openings               |            | 102        |

## Employer Participation in Apprenticeships

A component of the survey was to obtain an indication of employer participation in apprenticeship training, both compulsory and voluntary. For each priority trade indicated, respondents were asked if: they currently have apprentices; have never had apprentices and/or; are not interested in taking on apprentices.

Of the 157 responses, 61% of the respondents answered questions regarding apprentices related to their priority trade(s). It is important to note that some respondents indicated more than one answer regarding apprentices e.g. have never had apprentices and, are not interested in taking on apprentices.

### ***First Priority Trade:***

61% of the total 157 respondents answered questions regarding apprentices for their priority trade.  
Of this 61%:

|     |                               |
|-----|-------------------------------|
| 61% | currently have apprentices    |
| 23% | never have had apprentices    |
| 16% | not interested in apprentices |

### ***Second Priority Trade:***

30% of the total 157 respondents answered questions regarding apprentices for their second priority trade.

Of this 30%:

|     |                               |
|-----|-------------------------------|
| 66% | currently have apprentices    |
| 28% | never have had apprentices    |
| 11% | not interested in apprentices |

### ***Third Priority Trade:***

10% of the total 157 respondents answered questions regarding apprentices for their third priority trade.

Of this 10%:

|     |                               |
|-----|-------------------------------|
| 50% | currently have apprentices    |
| 31% | never have had apprentices    |
| 19% | not interested in apprentices |

## Recruitment and Retention Challenges

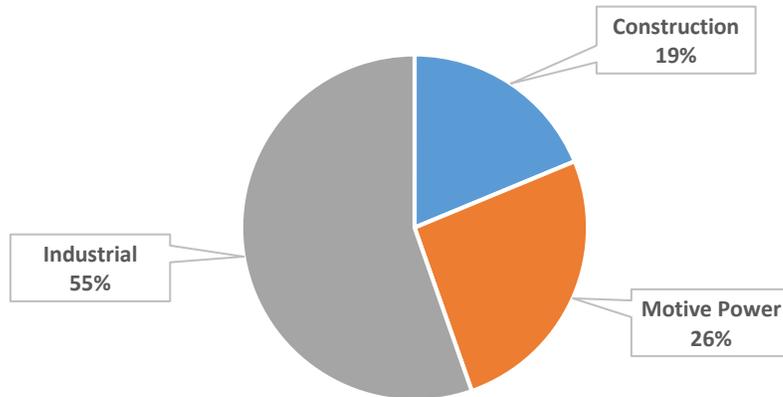
Respondents were asked if they had experienced challenges in recruiting or retaining journeypersons or apprentices for their indicated skilled trade priorities. Further, if they were experiencing challenges respondents were asked to indicate the primary reasons they believe contributed to these challenges.

94% of the total survey respondents answered this question. Of the 147 responses:

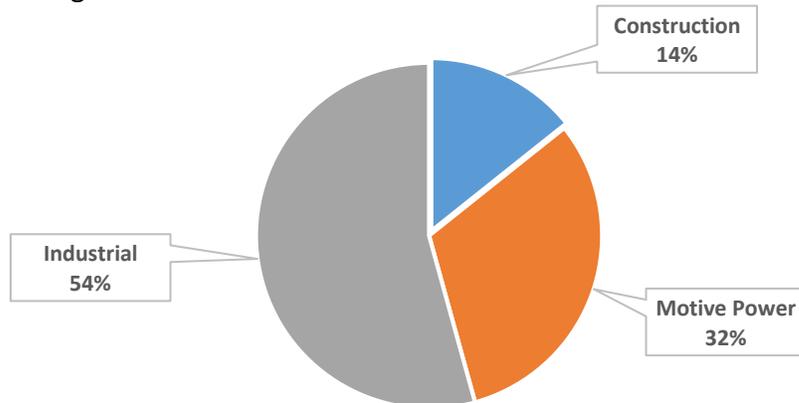
76%-----indicated YES

24%-----indicated NO

### Sector Responses Indicating YES



### Sector Responses Indicating NO



## Primary Reasons for Challenges

Respondents were asked to indicate what they believed to be the primary reason(s) for recruitment and retention challenges. To capture the maximum amount of relevant data, respondents could: (a) indicate more than one reason; (b) choose from a check list of common reasons and/or; (c) indicate additional reasons.

|                                                           |     |
|-----------------------------------------------------------|-----|
| Applicants lack experience                                | 54% |
| Lack of applicants                                        | 51% |
| Applicants lack technical skills                          | 50% |
| Applicants are looking for more pay than is being offered | 43% |
| Applicants lack academic qualifications/certifications    | 32% |
| Other                                                     | 30% |

## **“Other” Reasons for Recruitment & Retention Challenges**

Responses indicated under “other”, in order of priority, were as follows:

### **Poor Work Ethic**

Respondents indicated that these core employability skills are creating major challenges in the development and expansion of their workforce. Specifics provided include:

- a. Being at work on time
- b. Being at work everyday
- c. Putting in a full day’s work
- d. Poor attitude
- e. Lack of motivation and initiative
- f. Problem solving
- g. Managing time and priorities

### **Lack of Company Loyalty**

Respondents indicated a willingness and desire to promote from within, and assist employees with the cost of additional training. The concern however, is that employers are finding that employees often move on after gaining experience.

### **Lack of Public Transportation**

Respondents indicated a definite preference for hiring people locally, within a 50 kilometer radius was the most popular response. Respondents also indicated that recruiting people with the necessary skills and who are close enough to commute is extremely challenging. This coupled, with the lack of public transportation is compounding their inability to recruit people from the community.

### **Additional Reasons**

Additional responses that occurred the most often include: shift work, poor perception and awareness of the opportunities in skilled trades, unpleasant work environment (dirty) and high competition for qualified workers.

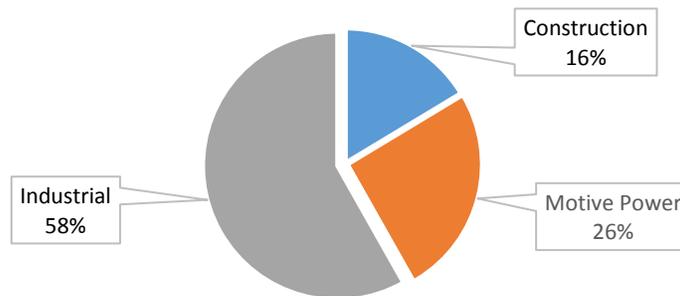
## Impact on Business

During the development of the survey, it was identified that an important component of the data would be to validate not only if there is a skilled trade gap in our local workforce but also if the gap is sufficiently critical that it is having a negative impact on business enterprises in the Brantford-Brant-Six Nation regions.

Respondents that indicated they were experiencing recruitment and retention challenges for their priority trades were asked whether these challenges were having a negative impact on their business.

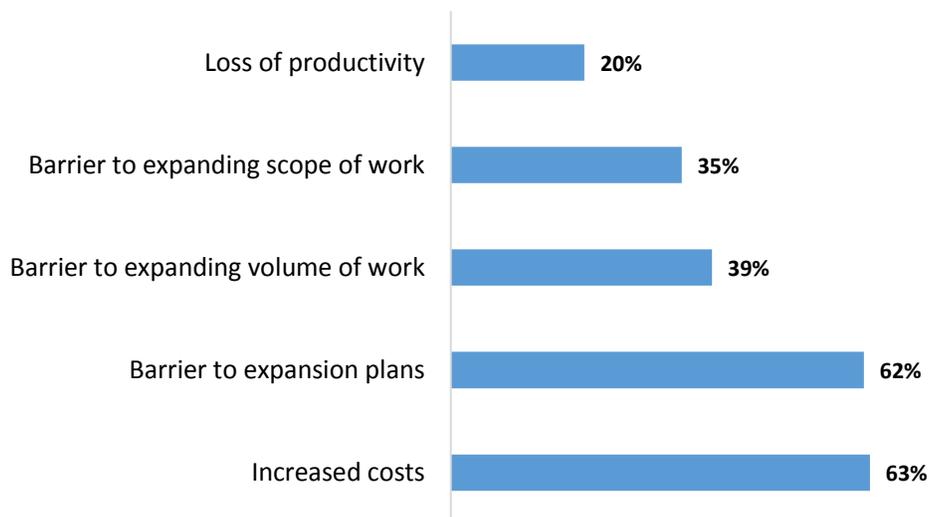
70% (110 responses) of the total survey respondents answered this question. Of the 110 responses the sector breakdown is as follows:

Sector Responses to Business Impact



Respondents were asked to indicate the primary negative impact(s) on their business as a result of recruitment and retention challenges for their skilled trade positions. To capture the maximum amount of relevant data, respondents could: (a) indicate more than one reason; (b) choose from a check list of common impacts and/or; (c) indicate additional reasons.

Negative Impact on Business

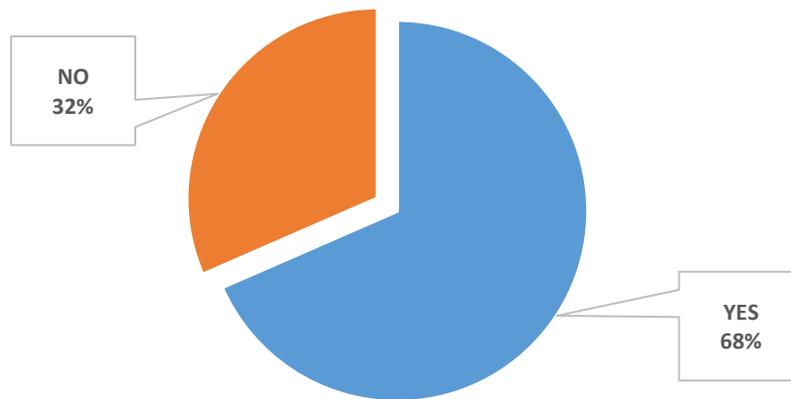


## Business & Industry Support

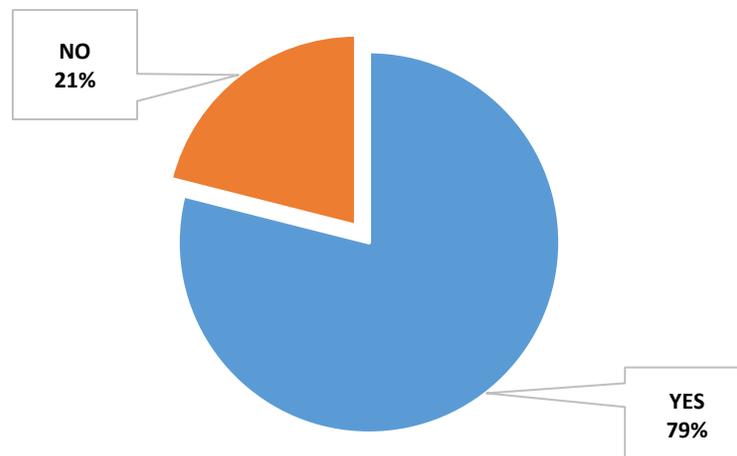
The goal of the Skilled Trades Alliance is to champion initiatives that will help build a skilled trades & apprenticeship workforce and create a community network that will actively promote and increase awareness of the local opportunities in skilled trades. Survey respondents were asked to indicate their willingness to provide future support for skilled trade initiatives.

To determine the level and interest of support from business and industry, respondents were asked if they would (a) provide a letter of support for local skilled trades training and (b) be willing to participate in future discussions related to skilled trades.

### Letter of Support for Local Skilled Trades Training



### Participation in Future Discussions



## Appendix A – Survey Questions

Unless indicated otherwise at the end of the survey, data will be used in aggregate form only.

The goal of the Skilled Trades Alliance is to secure local skilled trades training that will support business and industry in Brantford, Brant and Six Nations. Your input into our five minute survey (7 questions) will help to determine those trades, ranked in order of priority, that are in greatest demand in the construction, industrial and motive power skilled trades.

### SPECIAL NOTE:

The first three (3) questions will ask you to identify those skilled trades that are most important to your business. If you wish to identify a single trade as a priority, simply indicate N/A (not applicable) on questions 2 and 3. "\*" denotes mandatory field.

### \*Contact Information:

Name  
Company  
City/Town  
Email Address

### Primary Skilled Trade classification:

Construction                       Industrial                       Motive Power

### \* 1. The number one skilled trade to support your business is:

For this Trade (indicate any of the following that apply):

- Require journeypersons
- Require apprentices
- Currently have apprentices
- Have never had apprentices
- Not interested in taking on apprentices

Estimated number required over the next 3 years:

Journeypersons  
Apprentices

Comments:

### 2. The second priority for skilled trades to support your business is:

For this Trade (indicate any of the following that apply):

- Require journeypersons
- Require apprentices
- Currently have apprentices
- Have never had apprentices
- Not interested in taking on apprentices

Estimated number required over the next 3 years:

Journeyperson  
Apprentice

Comments:

3. The third priority for skilled trades to support your business is:

For this Trade (indicate any of the following that apply):

- Require journeypersons
- Require apprentices
- Currently have apprentices
- Have never had apprentices
- Not interested in taking on apprentices

Estimated number required over the next 3 years:

Journeyman

Apprentice

Comments:

4. Have you experienced challenges in recruiting or retaining journeypersons or apprentices for the trades you have listed in previous questions?

- Yes
- No

Please check all that apply:

- Lack of applicants
- Applicants lack technical skills
- Applicants lack experience
- Applicants lack academic qualifications/certifications
- Applicants are looking for more pay than is being offered
- Other (please specify)

Comments:

5. Have challenges associated with the retention and recruitment of skilled trades' people had a negative impact on your business? If so, please indicate all that apply:

- Barrier to expansion plans
- Barrier to expanding scope of work
- Barrier to expanding volume of work
- Loss of productivity
- Other (please specify)

Comments:

6. Would you be willing to provide a letter in support of local skilled trades training?

- Yes
- No

7. Would you be willing to participate in future discussions regarding local skilled trades programming?

- Yes
- No

The Skilled Trades Alliance would like to thank the  
City of Brantford and Enterprise Brant for their financial support of this  
project.