



Greening the Economy Transitioning
to New
Careers

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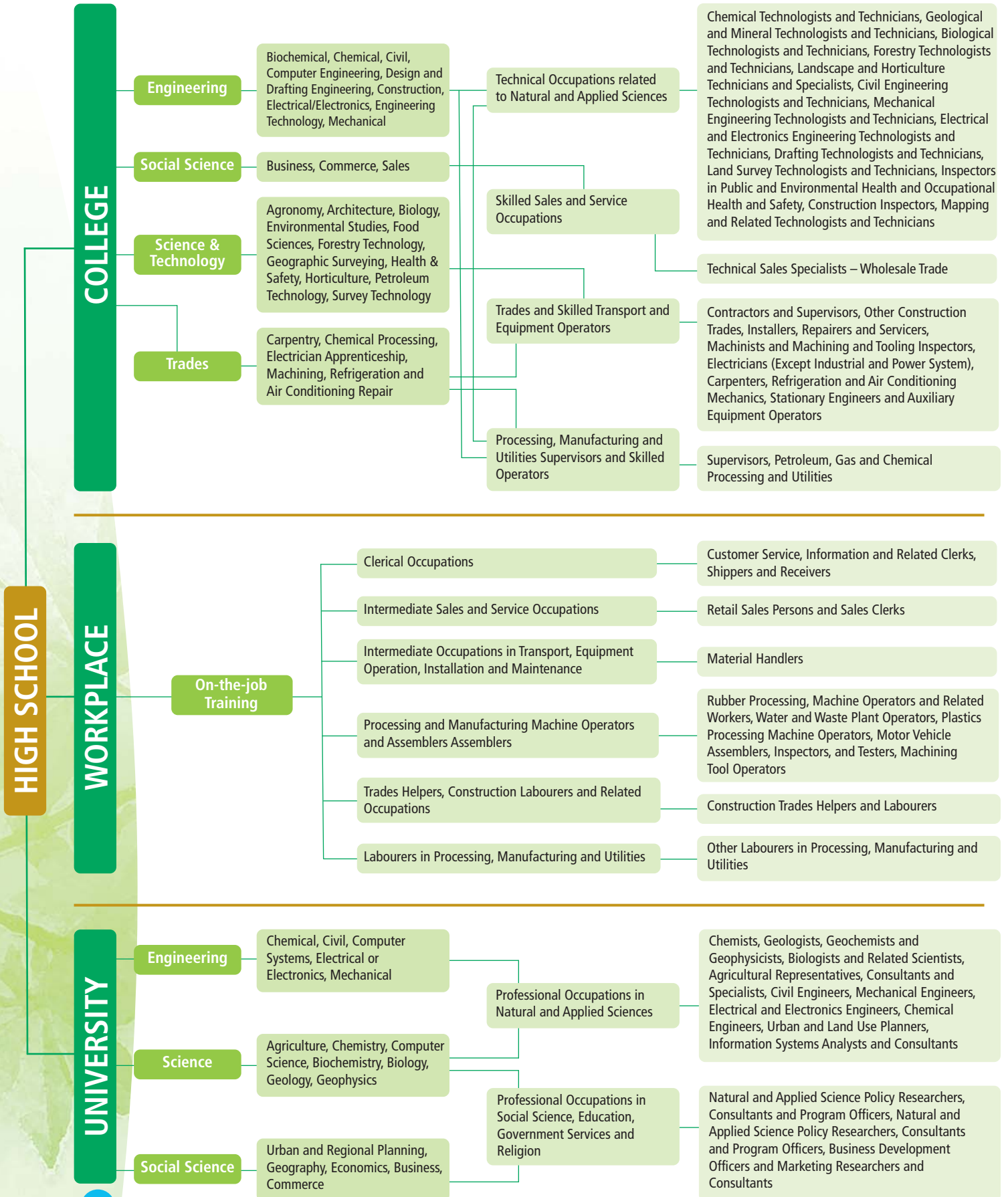
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**EMPLOYMENT
ONTARIO**

Educational Flow Chart



Agrologist

NOC 2123

Agrologists or agricultural representatives, consultants and specialists, provide assistance and advice to farmers on all aspects of farm management, cultivation, fertilization, harvesting, soil erosion and composition, disease prevention, nutrition, crop rotation and marketing. By studying commercial and native plant communities and livestock production, they improve yields while at the same time advocating sustainable farming and ranching methods. Agrologists may also study farm, urban, and wilderness interfaces to find solutions to the challenge of competing demands on the land base, for example wildlife habitat, timber, recreation, urban expansion and livestock¹.

Places of Employment¹:

- Businesses, institutions and governments that assist the farming community
- Self employed

Employment Requirements¹:

- A bachelor's or master's degree in agriculture or in a related science discipline
- Membership or eligibility for membership in a provincial institute of agrology is usually required

Local Educational Programs:

Program	Length	Certification	Institutions
Botany	4 years	Bachelor of Science	University of Toronto
Ecosystem Management	4 years	Bachelor in Environmental Studies	York University
Horticultural Studies	N/A	Certificate	Sheridan College, Humber College
Urban Ecologies Certificate	1 years	Certificate in Urban Ecologies	York University
Urban Arboriculture-Tree Care	1 year	Certificate	Humber College

The most important Essential Skills for this occupation are²:

- Reading text
- Document use
- Oral communication

The most important High School subjects are³:

- Sciences
- English

Number of Employees by Age Range⁴:

Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	0	0	0	0
25 – 44 years	35	15	10	60
45 years and over	20	20	0	40
Total Employees	55	35	10	100
% 45 years +	36.36%	57.14%	0.00%	40.00%

Source: Statistics Canada, 2006 Census

Average Salary

Based on 2006 Census Data ⁴ :	
Peel Halton	\$ 54,050
Toronto	\$ 57,333
York Region Brad WG	No data
Ontario	\$ 59,524

Agrologist

NOC 2123

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions, there are 100 agrologists employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific & technical services	30	26.09%	76,758	77,367	609	0.79%
111-112 Farms	20	17.39%	1,706	1,443	-263	-15.42%
115 Support activities for agriculture & forestry	10	8.70%	347	288	-59	-17.00%
417 Machinery, equipment and supplies wholesaler-distributors	10	8.70%	6,146	5,567	-579	-9.42%
561 Administrative and support services	10	8.70%	20,942	19,811	1,131	-5.40%
813 Religious, grant-making, civic, and professional and similar organizations	10	8.70%	6,598	7,929	1,331	20.17%
911 Federal government public administration	10	8.70%	8	36	28	350.00%
912 Provincial & territorial public administration	10	8.70%	45	243	198	440.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Biological technologists and technicians (NOC 2221)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Yongda Meat Supply Co.
12 Golden Gate Court
Scarborough, Ontario M1P 3A5
Telephone: 1 416 321 5699
Fax: 1 416 321 5575
www.yongdameat.com

Earthco Soil Mixtures
401 Bowes Road
Concord, Ontario L4K 1J1
Telephone: 1 416 789 4749
Fax: 1 905 738 5228
www.earthcosoils.com

Vanhart Greenhouses
950 Woodchoppers Lane
Kettleby, Ontario L0G 1J0
Telephone: 1 905 775 7412
Fax: 1 905 775 4977
www.vanhartsallorganic.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca. Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Architecture and Science Managers

NOC 0212

Architecture and science managers plan, organize, direct, control and evaluate the activities of an architecture, landscape architecture, scientific or statistical department, service or firm.¹

Places of Employment¹:

- Private sector
- Government
- Architectural firms
- Scientific research companies

Employment Requirements¹:

- Architecture managers require a degree in architecture, registration as a professional architect and several years of experience as an architect
- Science and other managers require a master's or doctoral degree in a scientific discipline and several years of experience in a related scientific discipline
- Landscape architecture managers require a degree in landscape architecture, licensing as a professional landscape architect and several years of experience as a landscape architect

Local Educational Programs:

Program	Length	Certification	Institutions
Architectural Preservation and Conservation Certificate	N/A	Certificate in Architectural Preservation and Conservation	Ryerson University
Architectural Science	4 years	Bachelor of Architectural Science	Ryerson University
Architectural Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, George Brown College, Humber College, Sheridan College
Chemical Engineering Technology – Environmental	3 years	Advanced Diploma	Seneca College, Sheridan College
Chemistry	4 years	Bachelor of Science	University of Toronto
Environmental Biology	4 years	Bachelor of Science	University of Toronto
Environmental Chemistry	4 years	Bachelor of Science	University of Toronto
Environmental Landscape Management	2 years	Diploma	Seneca College
Environmental Science Program	4 years	Bachelor of Science	York University
Geography	4 years	Bachelor of Science	University of Toronto, York University
Landscape Technician Program	2 years	Diploma	Humber College
Landscape Design	N/A	Certificate	Humber College

The most important Essential Skills for this occupation are²:

- Numeracy
- Writing
- Oral communication
- Computer use

The most important High School subjects are³:

- Math
- Sciences
- Blueprint reading
- Drafting
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	0	0	0	0
25 – 44 years	200	335	75	610
45 years and over	245	325	140	710
Total Employees	450	670	215	1,320
% 45 years +	55.06%	49.24%	65.12%	53.79%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary	based on 2006 Census Data ⁴
Peel Halton	\$ 100,264
Toronto	\$ 82,964
York Region Brad WG	\$ 91,216
Ontario	\$ 87,979

Architecture and Science Managers

NOC 0212

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are a total of 1,320 architecture and science managers employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific & technical services	520	38.95%	76,758	77,367	609	0.79%
325 Chemical manufacturing	140	10.49%	881	690	-191	-21.68%
621 Ambulatory health care services	75	5.62%	11,287	13,965	2,678	23.73%
414 Personal and household goods wholesaler-distributors	65	4.87%	5,324	5,233	-91	-1.71%
622 Hospitals	65	4.87%	100	82	-18	-18.00%
912 Provincial & territorial public administration	55	4.12%	45	243	198	440.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to senior management positions in the respective fields is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations.

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Architects, Urban Planners and Land Surveyors (NOC 215)
- Civil, Mechanical, Electrical and Chemical Engineers (NOC 213)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

ACI Wright Inc.
2171 Avenue Road, Suite 204
Toronto, Ontario M5M 4B4
Telephone: 416 322 2132
Fax: 416 850 4356
www.aciw.ca

Diamond + Schmitt Architects
384 Adelaide Street West, Suite 300
Toronto, Ontario M5V 1R7
Telephone: 416 862 8800
Fax: 416 862 5508
www.dsai.ca

Petroff Partnership Architects
260 Town Centre Blvd
Markham, Ontario L3R 8H8
Telephone: 905 470 7000
Fax: 905 470 7001
www.petroff.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Biological Technologists and Technicians

NOC 2221

Biological technologists and technicians provide technical support and services to scientists, engineers and other professionals working in fields such as agriculture, resource management, environmental protection, plant and animal biology, microbiology, cell and molecular biology and health sciences, or may work independently in these fields. They set up, operate, and maintain laboratory equipment, monitor experiments, and record observations and results. In addition, biological technologists and technicians develop and adapt laboratory procedures and devise solutions under the direction of biologists.¹

Places of Employment¹:

- Governments
- Health, research and educational institutions
- Manufacturers of food products, chemicals and pharmaceuticals
- Environmental consulting companies
- Biotechnology companies
- Resource and utilities companies

Employment Requirements¹:

- Completion of a two- to three-year college program in a field related to agriculture, biology, microbiology, wildlife or resource management is usually required for employment as a biological technologist
- Completion of a one to two-year college program in a related field is required for employment as a biological technician
- Certification with provincial associations is available, but voluntary

Local Educational Programs:

Program	Length	Certification	Institutions
Biotechnology	4 years	Bachelor of Science	York University
Biotechnology Technician Industrial Microbiology Program	2 years	Diploma	Centennial College
Environment and Science	4 years	Bachelor of Science	University of Toronto
Environmental Biology	4 years	Bachelor of Science	University of Toronto

The most important Essential Skills for this occupation are²:

- Reading text
- Numeracy
- Writing

The most important High School subjects are³:

- Sciences
- Social studies
- Math
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	65	40	35	140
25 – 44 years	135	210	90	435
45 years and over	25	95	20	140
Total Employees	225	345	145	715
% 45 years +	11.11%	27.54%	13.79%	19.58%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 42,947
Toronto	\$ 49,271
York Region Brad WG	\$ 48,475
Ontario	\$ 49,933

Biological Technologists and Technicians

NOC 2221

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 715 biological technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific & technical services	295	41.84%	76,758	77,367	609	0.79%
712 Heritage institutions	100	14.18%	110	91	-19	-17.27%
325 Chemical manufacturing	60	8.51%	881	690	-191	-21.68%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- There is limited mobility between occupations in this group
- Some technologists and technicians working in support of government and academic research in biology are university graduates

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Medical laboratory technicians (NOC 3212)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Florence Meat Supplies Ltd.

2136 Speers Road
Oakville, Ontario L6L 2X8
Telephone: 1 905 842 2066
Fax: 1905 842 2067
www.florencemeats.com

Thermography Clinic Inc.

3910 Bathurst St., Suite 202
Toronto, Ontario M3H 3N8
Telephone: 1 416 636 2916
Fax: 1 416 638 7553
www.thermographyclinic.com

Novopharm Ltd.

575 Hood Rd,
Markham, Ontario L3R 4E1
Telephone: 1 416 940 6777
Fax: 1 416 291 5555
www.novopharm.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Business Development Officers, Marketing Researchers & Consultants

NOC 4163

Business development officers and marketing researchers and consultants conduct research, formulate policies and manage programs to stimulate industrial and commercial business investment or tourism in urban and rural areas or to promote commercial or industrial products and services.¹

Places of Employment¹:

- Government departments
- International organizations
- Marketing firms
- Business associations
- Self employed

Employment Requirements¹:

- A bachelor's degree in economics, commerce, business administration or public administration is required
- Certification as a certified economic developer (Ec.D.) may be required

Local Educational Programs:

Program	Length	Certification	Institutions
Business	3 years	Advanced Diploma	Centennial College, George Brown College, Humber College, Seneca College, Sheridan College
Business administration	4 years	Bachelor of Business	Ryerson University, University of Toronto, York University
Certificate in Sustainability	N/A	Certificate in Sustainability (CKSS)	Ryerson University
Green Business Management	1 year	Graduate Certificate	Seneca College

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Numeracy

The most important High School subjects are³:

- Business
- English
- Math
- Computer related courses

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	405	960	330	1,695
25 – 44 years	2,490	5,350	1,510	9,350
45 years and over	1,155	2,005	850	4,010
Total Employees	4,050	8,315	2,690	15,055
% 45 years +	28.52%	24.11%	31.60%	26.64%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 66,138
Toronto	\$ 75,507
York Region Brad WG	\$ 66,182
Ontario	\$ 67,738

Business Development Officers, Marketing Researchers & Consultants

NOC 4163

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 15,055 business development officers and marketing research consultants employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	5,600	37.20%	76,758	77,367	609	0.79%
561 Administrative and support services	675	4.48%	20,942	19,811	-1,131	-5.40%
522 Credit intermediation and related activities	660	4.38%	4,745	4,119	-626	-13.19%
523 Securities, commodity contracts, and other financial investment and related activities	480	3.19%	18,511	22,124	3,613	19.52%
414 Personal and household goods wholesaler-distributors	475	3.16%	5,324	5,233	-91	-1.71%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to managerial positions is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Professional Occupations in Business Services to Management (NOC 1122)
- Sales, Marketing and Advertising Managers (NOC 0611)
- Professional Occupations in Public Relations and Communications (NOC 5124)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Lumos Research Inc.
1011 Upper Middle Rd. East, Suite 1451
Oakville, Ontario L6H 5Z9
Telephone: 1 905 257 7219
Fax: 1 905 257 6788
www.lumosresearch.com

Tim Moore Associates
6021 Yonge Street, Unit 317
Toronto, Ontario M2M 3W2
Telephone: 1 905 201 6515
www.timmooreassociates.com

Rooney Earl & Partners
17 Rouge River Circle
Markham, Ontario L6B 1A8
Telephone: 1 905 472 0894
Fax: 1 416 686 2694
www.RooneyEarl.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Carpenters

NOC 7271

Carpenters construct, erect, install, maintain and repair structures and components of structures made of wood, wood substitutes, lightweight steel and other materials. Environmental carpentry is the specialization in the use of environmentally friendly, energy-efficient and sustainable sources of building materials.¹

Places of Employment¹:

- Construction companies
- Carpentry contractors
- Factory maintenance departments
- Self employed

Employment Requirements¹:

- Completion of secondary school
- Completion of a three to four year apprenticeship program or a combination of over four years of work experience in the trade and some relevant high school, college or industry courses
- Trade certification is compulsory in Quebec and available but voluntary, in all other provinces and the territories

Local Educational Programs:

Program	Length	Certification	Institutions
Architectural Science	4 years	Bachelor of Architectural Science	Ryerson University
Architectural Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, George Brown College, Humber College
Construction Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	George Brown College
Construction and Environment - Regulations & Compliance	4 years	Degree	George Brown College
Construction Trades and Techniques	N/A	Certificate	George Brown College
Construction Millwright	N/A	Apprenticeship	George Brown College, Sheridan College
Materials Engineering	4 years	Bachelor of Applied Science Degree	University of Toronto

Local Union and Training Centre

Carpenters' Local Union 27 Joint Apprenticeship & Training Trust Fund Inc.
222 Rowntree Dairy Road, Woodbridge, Ontario L4L 9T2
Tel: 905 652-5506 www.carpenterstraining.ca

LIUNA Local 183 Training Centre
8700 Huntington Road, Woodbridge, Ontario
Tel: 416-242-7551 Fax: 416-242-7785 www.183training.com

The most important Essential Skills for this occupation are²:

- Document use
- Problem solving
- Numeracy

The most important High School subjects are³:

- Math
- Blueprint reading
- Industrial arts (woodworking)

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	435	825	340	1,600
25 – 44 years	1,915	3,330	1,115	6,360
45 years and over	1,360	2,270	1,045	4,675
Total Employees	3,710	6,425	2,500	12,635
% 45 years +	36.66%	35.33%	41.80%	37.00%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 40,863
Toronto	\$ 36,178
York Region Brad WG	\$ 41,060
Ontario	\$ 36,764

Carpenters

NOC 7271

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 12,635 carpenters employed.

The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
236 Construction of buildings	6,455	51.07%	13,667	13,829	162	1.19%
238 Specialty trade contractors	3,950	31.25%	23,111	24,416	1,305	5.65%
321 Wood product manufacturing	535	4.23%	584	567	- 17	-2.91%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to supervisory positions is possible with experience
- Red Seal trade certification allows for interprovincial mobility

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Insulators (NOC 7293)
- Floor covering installers (NOC 7295)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

DeMan Construction Corporation

776 Dundas Street East
Mississauga, Ontario L4Y 2B6
Telephone: 1 905 277 0363
Fax: 1 905 277 0369
www.demancorp.com

Ontario Construction Secretariat

940 The East Mall, Suite 120
Toronto, Ontario M9B 6J7
Telephone: 1 416 620 5210
Fax: 1 416 620 5310
www.iciconstruction.com

Stairfab Manufacturing Inc.

450 Kent Drive,
Newmarket, Ontario L3Y 4Y9
Telephone: 1 905 895 1050
Fax: 1 905 895 9565
www.stairfab.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Chemical Technologists and Technicians

NOC 2211

Chemical technologists and technicians provide technical support and services or may work independently in chemical engineering, chemical and biochemical research and analysis, industrial chemistry, chemical quality control and environmental protection. They perform chemical sampling and analysis and are involved in a variety of projects, for example analytical testing, quality control protocols, and product research and development. Chemical technologists and technicians can specialize in a number of disciplines, including environmental testing, mining and exploration, pharmaceuticals, and hazardous waste.¹

Places of Employment¹:

- Research and development companies
- Quality control laboratories
- Engineering consulting companies
- Manufacturing and processing industries
- Utilities companies
- Educational institutions
- Government

Employment Requirements¹:

- Chemical technologists usually require completion of a two or three year college program in chemical, biochemical or chemical engineering technology or a closely related discipline
- Chemical technicians usually require completion of a one or two year college program in chemical, biochemical or chemical engineering technology
- National certification for chemical technologists and technicians is available through the Canadian Society for Chemical Technology
- Certification in chemical engineering technology or in a related field is available through provincial associations of engineering/applied science technologists and technicians and may be required by employers
- A period of supervised work experience, usually two years, is required before certification

Local Educational Programs:

Program	Length	Certification	Institutions
Chemical Engineering	4 years, 5 year Co-op	Bachelor of Engineering	Ryerson University, University of Toronto
Chemical Engineering Technology	3 years	Advanced Diploma	Seneca College, Sheridan College
Environmental Chemistry	4 years	Bachelor of Science	University of Toronto

The most important Essential Skills for this occupation are²:

- Reading text
- Document use
- Writing
- Computer use
- Numeracy
- Thinking skills

The most important High School subjects are³:

- Chemistry
- Computer-related courses
- Math
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	180	150	120	450
25 – 44 years	960	835	340	2,135
45 years and over	675	365	310	1,350
Total Employees	1,815	1,350	770	3,935
% 45 years +	37.19%	27.04%	40.26%	34.31%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 52,382
Toronto	\$ 47,131
York Region Brad WG	\$ 56,583
Ontario	\$ 54,541

Chemical Technologists and Technicians

NOC 2211

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 3,935 chemical technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	875	22.26%	76,758	77,367	609	0.79%
325 Chemical manufacturing	855	21.76%	881	690	-191	-21.68%
311 Food manufacturing	540	13.74%	1,599	1,335	-264	-16.51%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Considerable mobility is possible among jobs within this occupational group
- Progression to managerial positions is possible with experience
- Some chemical technologists and technicians working in support of fundamental research in chemistry or biochemistry are university graduates

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Medical laboratory technicians (NOC 3212)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Virox Technologies Inc

2815 Bristol Circle, Unit 4
Oakville, Ontario L6H 6X5
Telephone: 1 905 813 0110
Fax: 1 905 813 0220
www.virox.com

Biochem Environmental Solutions Inc.

91 Milvan Drive, Unit 10,11
North York, Ontario M9L 1Z7
Telephone: 1 905 747 6600
Fax: 1 905 747 6622
www.biochemenvironmental.com

Riso Pharma Tech Inc.

110 West Beaver Creek, Unit 18
Richmond Hill, Ontario L4B 1J9
Telephone: 1 905 907 7174 ext. 228
Fax: 1 905 907 5195
www.risopharma.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Construction Inspector and Tester

NOC 2264

Construction inspectors and testers inspect the construction and maintenance of new and existing buildings, bridges, highways and industrial construction to ensure that specifications and building codes are observed and monitor work site safety.¹

Places of Employment¹:

- Federal, provincial and municipal governments
- Architectural and civil engineering consulting firms
- Construction companies
- Self employed

Employment Requirements¹:

- Completion of secondary school is required
- College diploma in construction, civil engineering or architectural technology plus several years of related work experience or several years of experience as a qualified tradesperson in a construction trade, such as plumbing, carpentry or electrical trade are required
- Provincial certification in a skilled trade or as an engineering technologist is usually required

Local Educational Programs:

Program	Length	Certification	Institutions
Architectural Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, George Brown College, Sheridan College
Building Renovation Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	George Brown College
Building Systems Engineering Technician	2 years	Diploma	Seneca College
Civil Engineering Technology	3 years	Advanced Diploma	George Brown College, Humber College, Seneca College
Construction Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	George Brown College
Construction and Environment - Regulations & Compliance	4 years	Degree	George Brown College
Construction Science and Management	4 years	Bachelor's Degree	George Brown College
Environmental and Site Investigation	1 year	Graduate Certificate	Seneca College
Home Inspection	N/A	Certificate	Humber College, Sheridan College

The most important Essential Skills for this occupation are²:

- Reading text
- Writing text
- Document use

The most important High School subjects are³:

- Math
- Physics
- Mechanics
- Chemistry
- Biology
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	75	45	15	135
25 – 44 years	180	325	185	690
45 years and over	295	360	180	835
Total Employees	550	730	380	1,660
% 45 years +	53.64%	49.32%	47.37%	50.30%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 53,959
Toronto	\$ 51,418
York Region Brad WG	\$ 66,105
Ontario	\$ 54,617

Construction Inspector and Tester

NOC 2264

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 1,660 construction inspectors and testers employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	580	35.05%	76,758	77,367	609	0.79%
913 Local, municipal and regional public administration	525	31.72%	35	56	21	60.00%
236 Construction of buildings	185	11.18%	13,667	13,829	162	1.19%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to construction management positions is possible with experience

Matrix of Skills Transferability:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Medical Technologists and Technicians (Except Dental) (NOC 321)
- Aircraft Mechanics and Aircraft Inspectors (NOC 7315)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Whitehall Homes & Construction

307 Robinson Street
Oakville, Ontario L6J 4A8
Telephone: 1 905 338 7230
Fax: 1 905 337 0416
www.whitehallhomes.ca

Canada 1 Roofing

1075 Pearson Dr.
Etobicoke, Ontario M9A 1Y8
Telephone: 1 416 239 0555
Fax: 1 416 239 0544
www.canada1roofing.com

Town of Newmarket

395 Mulock Dr. P.O. Box 328 Station Main, P.O. Box 328
Newmarket, Ontario L3Y 4X7
Telephone: 1 905 895 5193
Fax: 1 905 895 6004
www.newmarket.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Construction Managers

NOC 0711

Construction managers plan, organize, direct, control and evaluate the activities of a construction company or a construction department within a company, under the direction of a general manager or other senior manager.¹

Places of Employment¹:

- Construction companies
- Self employed

Employment Requirements¹:

- A university degree in civil engineering or a college diploma in construction technology is usually required
- A master's degree in project management may be required
- Several years of experience in the construction industry, including experience as a construction supervisor or field superintendent, are usually required
- Extensive experience in the construction industry may substitute for post-secondary education requirements
- Professional engineering status or construction trade certification may be required by some employers

Local Educational Programs:

Program	Length	Certification	Institutions
Architectural Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, George Brown College, Humber College, Sheridan College
Building Renovation Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	George Brown College
Construction Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	George Brown College
Construction and Environment - Regulations & Compliance	4 years	Degree	George Brown College
Construction Science and Management	4 years	Bachelor's Degree	George Brown College
Green Business Management	1 year	Graduate Certificate	Seneca College
Sustainable Energy & Building Technology	3 years	Diploma	Humber College

Local Union and Training Centre

LIUNA Local 183 Training Centre

8700 Huntington Road, Woodbridge, Ontario

Tel: 416-242-7551 Fax: 416-242-7785 www.183training.com

Labourers Local 506

1600 Major MacKenzie Dr. East, Richmond Hill, Ontario L4S 1P4

Tel: 905-883-4268

The most important Essential Skills for this occupation are²:

- Oral communication
- Problem solving
- Computer use
- Document use

The most important High School subjects are³:

- Industrial arts
- Business
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	90	165	85	340
25 – 44 years	1,480	2,010	1,290	4,780
45 years and over	1,340	1,585	1,265	4,190
Total Employees	2,915	3,760	2,640	9,310
% 45 years +	46.05%	42.15%	47.92%	45.01%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 82,502
Toronto	\$ 104,831
York Region Brad WG	\$ 87,278
Ontario	\$ 81,970

Construction Managers

NOC 0711

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 9,310 construction managers employed.
The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
236 Construction of buildings	5,170	55.50%	13,667	13,829	162	1.19%
238 Specialty trade contractors	1,650	17.71%	23,111	24,416	1,305	5.65%
237 Heavy and civil engineering construction	640	6.87%	569	498	-71	-12.48%
541 Professional, scientific & technical services	515	5.53%	76,758	77,367	609	0.79%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to senior management positions is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Managers in construction and transportation (NOC 071)
- Contractors and supervisors, trades and related workers (NOC 721)
- Civil engineers (NOC 2131)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

SMAI METTKO Project & Construction Managers

277 Lakeshore Road East, Suite 408
Telephone: 1 416 444 9600
Fax: 1 416 444 3166
www.mettko.com

Ontario Construction Secretariat

940 The East Mall, Suite 120
Toronto, Ontario M9B 6J7
Telephone: 1 416 620 5210
Fax: 1 416 620 5310
www.iciconstruction.com

Harbridge + Cross Limited

350 Creditstone Road, Suite 202
Concord, Ontario L4K 3Z2
Telephone: 1 416 213 7165
Fax: 1 905 738 9649
www.harbridgeandcross.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Construction Trades Helpers and Labourers

NOC 7611

Construction trades helpers and labourers assist skilled tradespersons and perform labouring activities at construction sites, in quarries and in surface mines.¹

Places of Employment¹:

- Construction companies
- Trade labour contractors
- Surface mine and quarry operators

Employment Requirements¹:

- Some experience as a general construction labourer may be required
- Specialty experience may be required in some fields

Local Educational Programs:

Program	Length	Certification	Institutions
Construction and Maintenance Electrician Apprenticeship	N/A	Apprenticeship	George Brown College, Humber College, Sheridan College
Construction Millwright	N/A	Apprenticeship	George Brown College, Sheridan College
Electric Apprenticeship	N/A	Apprenticeship	Centennial College
Plumber	N/A	Apprenticeship	George Brown College, Humber College

Local Union and Training Centre

LIUNA Local 183 Training Centre

8700 Huntington Road, Woodbridge, Ontario

Tel: 416-242-7551 Fax: 416-242-7785 www.183training.com

Labourers Local 506

1600 Major MacKenzie Dr. East, Richmond Hill, Ontario L4S 1P4

Tel: 905-883-4268

The most important Essential Skills for this occupation are²:

- Reading text
- Document use
- Numeracy
- Thinking skills

The most important High School subjects are³:

- Industrial arts
- Physical education
- Math
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	1,425	2,080	920	4,425
25 – 44 years	2,695	5,170	1,515	9,380
45 years and over	1,865	3,690	1,155	6,710
Total Employees	5,985	10,940	3,590	20,515
% 45 years +	31.16%	33.73%	32.17%	32.71%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 45,196
Toronto	\$ 41,717
York Region Brad WG	\$ 44,829
Ontario	\$ 39,015

Construction Trades Helpers and Labourers

NOC 7611

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are a total of 20,515 construction trades helpers and labourers employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
236 Construction of buildings	10,440	50.89%	13,667	13,829	162	1.19%
238 Specialty trade contractors	5,280	25.74%	23,111	24,416	1,305	5.65%
237 Heavy and civil engineering construction	1,655	8.07%	5,042	5,096	54	1.07%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Mobility is possible among workers in this unit group

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Other Trades Helpers and Labourers (NOC 7612)
- Public Works and Maintenance Labourers (NOC 7621)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Bot Construction Group

1224 Speers Road
Oakville, Ontario L6L 2X4
Telephone: 1 905 827 4167
Fax: 1 905 827 0458
www.botconstruction.ca

EllisDon Corporation

89 Queensway Avenue West, Suite 800
Mississauga, Ontario L5B 2V2
Phone: 1 905 896 8900
Fax: 1 905 896 8911
www.ellisdon.com

BJ Brickwork Construction Ltd.

55 16th Avenue
Richmond Hill, Ontario, L4C 7A5
Telephone: 1 905 886 1045
Fax: 1 905 731 2327
www.bjbrickwork.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Contractors & Supervisors, Other Construction Trades, Installers, Repairers & Servicers**NOC 7219**

This unit group includes roofing, masonry, painting and other construction trade contractors, not elsewhere classified, who own and operate their own business. Supervisors in this unit group supervise and co-ordinate the activities of various tradespersons, installers, repairers and servicers classified in the following minor groups: Masonry and Plastering Trades (728), Other Construction Trades (729) and Other Installers, Repairers and Servicers (744). This unit group also includes prefabricated product installation and service contractors and proprietors of some repair and service establishments.¹

Places of Employment¹:

- Service and repair shops
- Self-employed
- Construction companies

Employment Requirements¹:

- Completion of secondary school usually required
- Several years of experience in the trade or in the work area supervised are usually required
- Trade certification may be required for some occupations in this unit group

Local Educational Programs:

Program	Length	Certification	Institutions
Construction and Environment - Regulations & Compliance	4 years	Degree	George Brown College
Construction Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	George Brown College
Construction Science and Management	4 years	Bachelor's Degree	George Brown College
Construction Trades and Techniques	N/A	Certificate	George Brown College

Local Union and Training Centre**LIUNA Local 183 Training Centre**

8700 Huntington Road, Woodbridge, Ontario

Tel: 416-242-7551 Fax: 416-242-7785 www.183training.com**Labourers Local 506**

1600 Major MacKenzie Dr. East, Richmond Hill, Ontario L4S 1P4

Tel: 905-883-4268

The most important Essential Skills for this occupation are²:

- Numeracy
- Oral communication

The most important High School subjects are³:

- Industrial arts
- Math
- Machine shop
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	75	85	55	215
25 – 44 years	690	945	520	2,155
45 years and over	420	580	475	1,475
Total Employees	1,185	1,610	1,050	3,845
% 45 years +	35.44%	36.02%	45.24%	38.36%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 58,982
Toronto	\$ 49,317
York Region Brad WG	\$ 62,502
Ontario	\$ 54,683

Contractors & Supervisors, Other Construction Trades, Installers, Repairers & Servicers**NOC 7219****Top Industries of Employment for 3 regions^{4,5}:**

Across all three regions there are a total of 3,840 contractors and supervisors, other construction trades, installers, repairers and servicers employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
238 Specialty trade contractors	2,115	55.08%	23,111	24,416	1,305	5.65%
236 Construction of buildings	1, 195	31.12%	13,667	13,829	162	1.19%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- There is little or no mobility among supervisors in this unit group

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations.

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Construction Managers
- Carpenters

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Maxum Drywall Inc.
1681 Langstaff Road, Unit #18
Vaughan, Ontario L4K 5T3
Telephone: 1 905 856 4108
Fax: 1 905 856 9413
www.maxumdrywall.com

The Oak Stair Limited
46 Ashbridge Circle
Woodbridge, Ontario L4L 3R5
Telephone: 1 905 851 1122
Fax: 1 905 851 1124
www.oakstair.com

Walter's Landscaping
10 Ruggles Avenue
Thornhill, Ontario L3T 3S5
Telephone: 1 905 889 2691
Fax: 1 905 889 8791
www.walterslandscaping.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Customer Service, Information and Related Clerks

NOC 1453

Customer service, information and related clerks answer enquiries and provide information regarding an establishment's goods, services and policies and provide customer services such as receiving payments and processing requests for services.¹

Places of Employment¹:

- Retail establishments
- Call centres
- Insurance, telephone and utility companies

Employment Requirements¹:

- Completion of secondary school is usually required
- Completion of some college or other post-secondary programs may be required
- Clerical or sales experience may be required

Local Educational Programs:

Program	Length	Certification	Institutions
Business	3 years	Advanced Diploma	Centennial College, George Brown College, Humber College, Seneca College, Sheridan College
Business administration	4 years	Bachelor of Business	Ryerson University, University of Toronto, York University
Green Business Management	1 year	Graduate Certificate	Seneca College
Thinking Environmentally	N/A	Certificate	Humber College

The most important Essential Skills for this occupation are²:

- Reading text
- Document use
- Numeracy
- Thinking skills

The most important High School subjects are³:

- English
- French
- Computer basics
- Business

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	2,435	3,465	1,250	7,150
25 – 44 years	7,705	9,475	3,030	20,210
45 years and over	3,855	4,000	1,890	9,745
Total Employees	13,995	16,940	6,170	37,105
% 45 years +	27.55%	23.61%	30.63%	26.26%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 39,120
Toronto	\$ 37,175
York Region Brad WG	\$ 41,767
Ontario	\$ 36,492

Customer Service, Information and Related Clerks

NOC 1453

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 37,105 customer service, information and related clerks employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
561 Administrative and support services	4,565	12.30%	20,942	19,811	-1,131	-5.40%
517 Telecommunications	3,455	9.31%	484	744	260	53.72%
541 Professional, scientific and technical services	1,910	5.15%	76,758	77,367	609	0.79%
417 Machinery, equipment and supplies wholesaler-distributors	1,800	4.85%	6,146	5,567	-579	-9.42%
522 Credit intermediation and related activities	1,420	3.83%	4,745	4,119	-626	-13.19%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to supervisory positions is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Clerical Occupations, General Office Skills (NOC 141)
- Customer Service Representatives - Financial Services (1433)
- Retail Salespersons and Sales Clerks (NOC 6421)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Acadian Group

6975 Davand Drive
Mississauga, Ontario L5T 1L5
Telephone: 1 905 564 1717
Fax: 1 905 564 1723
www.acadiangroup.ca

Advantex Marketing International Inc.

600 Alden Road, Suite 606
Markham, Ontario L3R 0E7
Telephone: 1 905 470 9558
Fax: 1 905 946 2984
www.advantex.com

Combined Insurance

7300 Warden Avenue
Markham, Ontario L3R0X3
Telephone: 1 905 305 1922
Fax: 1 905 305 8600
www.combined.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Drafting Technologists and Technicians

NOC 2253

Drafting technologists and technicians prepare engineering designs, drawings and related technical information, in multidisciplinary engineering teams or in support of engineers, architects or industrial designers, or they may work independently.¹

Places of Employment¹:

- Consulting companies
- Construction companies
- Utility companies
- Resource companies
- Government

Employment Requirements¹:

- Completion of secondary school is usually required
- Completion of a two- to three-year college program in engineering design and drafting technology or in a related field is usually required for drafting and design technologists
- Completion of a one- to two-year college program in drafting or completion of a three to four year apprenticeship program or four to five years of related experience plus completion of college or industry courses in drafting are usually required for drafting technicians
- Trade certification for draftspersons is available, but voluntary in Ontario
- Certification in engineering design and drafting technology or in a related field through provincial associations of engineering/applied science technologists and technicians may be required by employers
- A period of supervised work experience, usually two years, is required before certification

Local Educational Programs:

Program	Length	Certification	Institutions
Architectural Science	4 years	Bachelor of Architectural Science	Ryerson University
Architectural Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, George Brown College, Humber College, Sheridan College
Mechanical Engineering Technician/Technology - Design and Drafting	2 years regular 3 years Co-op	Diploma Advanced Diploma	Sheridan College

The most important Essential Skills for this occupation are²:

- Reading text
- Document use
- Computer use
- Numeracy

The most important High School subjects are³:

- Math
- Graphic design
- Drafting
- Blueprint reading
- Sciences

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	145	110	90	345
25 – 44 years	740	1,025	345	2,110
45 years and over	650	655	350	1,655
Total Employees	1,535	1,790	785	4,110
% 45 years +	42.35%	36.59%	44.59%	40.27%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 52,620
Toronto	\$ 42,529
York Region Brad WG	\$ 48,155
Ontario	\$ 49,427

Drafting Technologists and Technicians

NOC 2253

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 4,110 drafting technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	2,200	53.59%	76,758	77,367	609	0.79%
332 Fabricated metal product manufacturing	295	7.19%	3,024	2,586	-438	-14.48%
221 Utilities	165	4.02%	180	281	101	56.11%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Mobility is possible to civil, mechanical, electrical or other engineering design technologies through educational or work specialization
- Senior and supervisory drafting and design technology workers require experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Architects, Urban Planners and Land Surveyors (NOC 215)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Etratech Inc.
1047 Cooke Boulevard
Burlington, Ontario L7T 4A8
Telephone: 1 905 681 7544
Fax: 1 905 681 7601
www.etrtech.com

Stantec
401 Wellington Street West, Suite 100
Toronto, Ontario M5V 1E7
Telephone: 1 416 596 6686
Fax: 1 416 596 6680
www.stantec.com

Rochon Engineering Corporation
84 Simpson Road
Bolton, Ontario L7E 4G2
Telephone: 1 905 660 7660
Fax: 1 905 857 9196
www.rochons.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Economists, Policy Researchers and Analysts

NOC 4162

Environmental economists, policy researchers and analysts conduct research, monitor data, analyze information and prepare reports and plans to resolve economic and business problems and develop models to analyze, explain and forecast economic behaviour and patterns. They specialize in incorporating environmental implications into economic analysis and studying the environmental impacts of projects and policies from an economic perspective. In turn they advise industry and government on the environmental impacts of decisions. Environmental economists, policy researchers and analysts may also be involved in developing theories that model the economic value of the environment and how it interacts with all aspects of the economy.¹

Places of Employment¹:

- Government departments
- Various agencies throughout the private sector
- Unions
- Research organizations
- Banks and investment firms

Employment Requirements¹:

- A master's degree in economics or in a related discipline such as business administration or statistics is usually required
- A doctorate in economics may be required

Local Educational Programs:

Program	Length	Certification	Institutions
Business	3 years	Advanced Diploma	Centennial College, George Brown College, Humber College, Seneca College, Sheridan College
Business Administration	4 years	Bachelor of Business	Ryerson University, University of Toronto, York University
Certificate in Sustainability	N/A	Certificate in Sustainability (CKSS)	Ryerson University
Environmental Policy and Practice	4 years	Bachelor of Arts	University of Toronto
Environmental Studies Program	4 years	Bachelor of Environmental Studies Degree	York University
Innis Environmental Studies Programs	4 years	Bachelor of Arts Degree/ Bachelor of Science	University of Toronto

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Computer use
- Thinking skills

The most important High School subjects are³:

- English
- Sciences
- Business
- Math

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	10	50	45	105
25 – 44 years	175	580	50	805
45 years and over	125	340	65	530
Total Employees	310	970	160	1,440
% 45 years +	40.32%	35.05%	40.63%	36.81%

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 98,245
Toronto	\$ 80,925
York Region Brad WG	\$ 55,989
Ontario	\$ 83,008

Source: Statistics Canada, 2006 Census

Environmental Economists, Policy Researchers and Analysts

NOC 4162

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 1,440 environmental economists, policy researchers and analysts employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
912 Provincial and territorial public administration	415	28.82%	45	243	198	440.00%
541 Professional, scientific and technical services	295	20.49%	76,758	77,367	609	0.79%
522 Credit intermediation and related activities	205	14.24%	4,745	4,119	-626	-13.19%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to managerial positions in economics is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Financial and investment analysts (1112)
- Securities agents, investment dealers and brokers (1113)
- Economic development officers and marketing researchers and consultants (4163)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Corporation of the Town of Oakville

1225 Trafalgar Road, P.O. Box 310
Oakville, Ontario L6J 5A6
Telephone: 1 905 845 6601
Fax: 1 905 815 2001
www.oakville.ca

Ministry of Economic Development and Trade

1201 Wilson Ave., C-Suite 314
Toronto, Ontario M3M 1J8
Telephone: 1 416 235 4286
Fax: 1 416 235 4338
www.ontario-canada.com

South Lake Community Futures Development Corporation

183 The Queensway South
Keswick, Ontario L4P 2A3
Telephone: 1 905 476 1244
Fax: 1 905 476 9978
www.southlakecfdc.org

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Electrical and Electronics Engineering Technologists and Technicians

NOC 2241

Electrical and electronics engineering technologists and technicians may work independently or provide technical support and services in the design, development, testing, production and operation of electrical and electronic equipment and systems.¹

Places of Employment¹:

- Electrical utilities companies
- Communications companies
- Manufacturers of electrical and electronic equipment
- Other manufacturing, process and transportation industries
- Consulting firms
- Government

Employment Requirements¹:

- Completion of a two- or three-year college program in electrical or electronics engineering technology, computer engineering technology, telecommunications technology or an equivalent is usually required for electrical or electronics engineering technologists
- Completion of a one- or two-year college program in electrical or electronics engineering technology is usually required for electrical or electronics engineering technicians
- Certification in electrical or electronics engineering technology or in a related field is available through provincial associations of engineering/applied science technologists and technicians and may be required for some positions
- A period of supervised work experience, usually two years, is required before certification

Local Educational Programs:

Program	Length	Certification	Institutions
Electrical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University
Electronics Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial, Humber College, Seneca College, Sheridan College
Electromechanical Engineering Technician/Technology	2 years regular 3 years Co-op	Diploma Advanced Diploma	Centennial College, George Brown College, Sheridan College
Energy Systems Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College

Local Union and Training Centre

International Brotherhood of Electrical Workers Local 353
 1377 Lawrence Ave East, North York, On M3A 3P8
 Tel: 416-510-3530 Fax: 416-510-3531 www.ibew353.org

The most important Essential Skills for this occupation are²:

- Oral communication
- Working with others
- Computer use
- Thinking skills

The most important High School subjects are³:

- Math
- Sciences
- Electronics
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	195	180	125	500
25 – 44 years	985	1,025	430	2,440
45 years and over	665	840	550	2,055
Total Employees	1,845	2,045	1,105	4,995
% 45 years +	36.04%	41.08%	49.77%	41.14%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 56,768
Toronto	\$ 51,248
York Region Brad WG	\$ 55,835
Ontario	\$ 59,965

Electrical and Electronics Engineering Technologists and Technicians

NOC 2241

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 4,995 electrical and electronics engineering technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
334 Computer and electronic product manufacturing	1,115	22.32%	1,074	874	-200	-18.62%
541 Professional, scientific and technical services	790	15.82%	76,758	77,367	609	0.79%
221 Utilities	390	7.81%	180	281	101	56.11%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- There is mobility to other related occupations such as technical sales, electronics service technicians, instrument technicians and avionics technicians
- Progression to managerial positions in engineering, production or operations is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Electronic service technicians (household and business equipment) (2242)
- Industrial instrument technicians and mechanics (2243)
- Aircraft instrument, electrical and avionics mechanics, technicians and inspectors (2244)
- Drafting technologists and technicians (2253)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Rotoflex

420 Ambassador Drive
Mississauga, Ontario L5T 2R5
Telephone: 1 905 670 8700
Fax: 1 905 670 3402
www.rotoflex.com

IRIS Power

3110 American Drive
Mississauga, Ontario L4V 1T2
Telephone: 1 905 677 4824
Fax: 1 905 677 8498
www.irispower.com

Alutron Modules Inc.

420 Industrial Parkway S.
Aurora, Ontario L4G 3V7
Telephone: 1 905 727 8788
Fax: 1 905 727 8978
www.alutronmodules.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Electrical and Electronics Engineer

NOC 2133

Electrical and electronics engineers design, plan, research, evaluate and test electrical and electronic equipment and systems.¹

Places of Employment¹:

- Utilities companies
- Communications companies
- Manufacturers of electrical and electronic equipment
- Consulting firms
- Manufacturing, processing and transportation industries
- Government

Employment Requirements¹:

- A bachelor's degree in electrical or electronics engineering or in an appropriate related engineering discipline is required
- A master's or doctoral degree in a related engineering discipline may be required
- Licensing by a provincial or territorial association of professional engineers is required to approve engineering drawings and reports and to practise as a Professional Engineer (P.Eng.)
- Engineers are eligible for registration following graduation from an accredited educational program, and after three or four years of supervised work experience in engineering and passing a professional practice examination
- Supervisory and senior positions in this unit group require experience

Local Educational Programs:

Program	Length	Certification	Institutions
Electrical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University
Electronics Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial, Humber College, Seneca College, Sheridan College
Electromechanical Engineering Technician/Technology	2 years regular 3 years Co-op	Diploma Advanced Diploma	Centennial College, George Brown College, Sheridan College
Energy Systems Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College
Environmental Engineering	4 years	Bachelor of Engineering	University of Toronto

Local Union and Training Centre

International Brotherhood of Electrical Workers Local 353
 1377 Lawrence Ave East, North York, On M3A 3P8
 Tel: 416-510-3530 Fax: 416-510-3531 www.ibew353.org

The most important Essential Skills for this occupation are²:

- Reading text
- Writing text
- Document use
- Numeracy

The most important High School subjects are³:

- Math
- Sciences
- Electronics
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	80	80	45	205
25 – 44 years	1,140	1,765	930	3,835
45 years and over	1,090	1,225	780	3,095
Total Employees	2,310	3,070	1,755	7,135
% 45 years +	47.19%	39.90%	44.44%	43.38%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 76,895
Toronto	\$ 72,666
York Region Brad WG	\$ 84,697
Ontario	\$ 81,868

Electrical and Electronics Engineer

NOC 2133

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 7,135 electrical and electronics engineers employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	2,540	35.65%	76,758	77,367	609	0.79%
334 Computer and electronic product manufacturing	1,155	16.21%	1,074	874	-200	-18.62%
221 Utilities	730	10.25%	180	281	101	56.11%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Computer engineers (except software engineers and designers) (2147)
- Electrical and electronics engineering technologists and technicians (2241)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

TechPower Developments Inc.
3750 A Laird Rd., Suite 16
Mississauga, Ontario L5L 0A6
Telephone: 1 905 337 8232
Fax: 1 905 337 9050
www.techpowerdevelopmentsinc.com

Ridgewood Electric Ltd.
120 Rutherford Road South
Brampton, Ontario L6W 3J5
Telephone: 1 905 454 2721
Fax: 1 905 454 2725
www.ridgewood-electric.com

Alutron Modules Inc.
420 Industrial Parkway S.
Aurora, Ontario L4G 3V7
Telephone: 1 905 727 8788
Fax: 1 905 727 8978
www.alutronmodules.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Electricians (except industrial and power system)

NOC 7241

Electricians in this unit group lay out, assemble, install, test, troubleshoot and repair electrical wiring, fixtures, control devices and related equipment in buildings and other structures.¹

Places of Employment¹:

- Electrical contractors
- Self employed
- Maintenance departments of buildings and other establishments

Employment Requirements¹:

- Completion of secondary school is usually required
- Completion of a four- to five-year apprenticeship program is usually required
- Trade certification for construction electricians is compulsory in Newfoundland and Labrador, Nova Scotia, Prince Edward Island, New Brunswick, Quebec, Ontario, Saskatchewan, Alberta, British Columbia, Nunavut, the Northwest Territories and the Yukon, and available, but voluntary, in Manitoba
- Trade certification for electricians (domestic and rural) is mandatory in Quebec and Ontario, and available, but voluntary, in Newfoundland and Labrador
- Interprovincial trade certification (Red Seal) is also available to qualified construction electricians

Local Educational Programs:

Program	Length	Certification	Institutions
Construction and Maintenance Electrician Apprenticeship	N/A	Apprenticeship	George Brown College, Humber College, Sheridan College
Electric Apprenticeship	N/A	Apprenticeship	Centennial College, Humber College, Sheridan College

Local Union and Training Centre

International Brotherhood of Electrical Workers Local 353
1377 Lawrence Ave East, North York, On M3A 3P8
Tel: 416-510-3530 Fax: 416-510-3531 www.ibew353.org

The most important Essential Skills for this occupation are²:

- Reading text
- Numeracy
- Document use

The most important High School subjects are³:

- Math
- English
- Industrial arts

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	475	405	325	1,205
25 – 44 years	1,615	1,925	1,215	4,755
45 years and over	920	1,320	815	3,055
Total Employees	3,010	3,650	2,355	9,015
% 45 years +	30.56%	36.16%	34.61%	33.89%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 50,795
Toronto	\$ 47,352
York Region Brad WG	\$ 56,552
Ontario	\$ 51,474

Electricians (except industrial and power system)

NOC 7241

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 9,015 electricians employed.
The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
238 Specialty trade contractors	7,655	84.87%	23,111	24,416	1,305	5.65%
236 Construction of buildings	630	6.98%	13,667	13,829	162	1.19%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to supervisory positions is possible with experience
- Red Seal trade certification allows for interprovincial mobility

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

No occupations were found where direct transfers exist however occupations with significant overlap between the skills and knowledge required are:

- Industrial electricians (7242)
- Power system electrician (7243)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Ridgewood Electric Ltd.
120 Rutherford Road South
Brampton, Ontario L6W 3J5
Telephone: 1 905 454 2721
Fax: 1 905 454 2725
www.ridgewood-electric.com

Everest Restoration
100 Cherry Street
Toronto, Ontario M5A 3L1
Telephone: 1 416 465 3989
Fax: 1 416 465 9589
www.everest-restoration.com

P&C General Contracting Ltd.
250 Shields Court, Unit 24
Markham, Ontario L3R 9W7
Telephone: 1 905 479 3015
Fax: 1 905 479 0470
www.pandccontracting.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Energy Conservation Engineer

NOC 2132

Energy conservation engineers research, design and develop machinery and systems for heating, ventilating and air conditioning, power generation, transportation, processing and manufacturing. They also perform duties related to the evaluation, installation, operation and maintenance of mechanical systems.¹

Places of Employment¹:

- Consulting firms
- Power-generating utilities companies
- Manufacturing, process and transportation companies
- Self employed

Employment Requirements¹:

- A bachelor's degree in mechanical engineering or in a related engineering discipline is required
- A master's degree or doctorate in a related engineering discipline may be required
- Licensing by a provincial or territorial association of professional engineers is required to approve engineering drawings and reports and to practise as a Professional Engineer (P.Eng.)
- Engineers are eligible for registration following graduation from an accredited educational program, and after three or four years of supervised work experience in engineering and passing a professional practice examination
- Supervisory and senior positions in this unit group require experience

Local Educational Programs:

Program	Length	Certification	Institutions
Environmental Engineering	4 years	Bachelor of Engineering	University of Toronto
Environmental Engineering Science Certificate	N/A	Certificate in Environmental Engineering Science	Ryerson University
Industrial Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University, University of Toronto
Mechanical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University, University of Toronto
Mechanical Engineering	2 years	Diploma	Centennial College, George Brown College, Seneca College, Sheridan College

Local Union and Training Centre

Power Workers' Union
244 Eglinton Ave. East, Toronto, Ontario M4P 1K2
Fax: 416 481-7115 www.pwu.ca

The most important Essential Skills for this occupation are²:

- Reading text
- Writing text
- Computer use
- Numeracy

The most important High School subjects are³:

- Math
- Physics
- Chemistry
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	80	75	55	210
25 – 44 years	1,665	1,985	885	4,535
45 years and over	1,420	1,315	895	3,630
Total Employees	3,165	3,375	1,835	8,375
% 45 years +	44.87%	38.96%	48.77%	43.34%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 73,887
Toronto	\$ 71,968
York Region Brad WG	\$ 82,310
Ontario	\$ 78,028

Energy Conservation Engineer

NOC 2132

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 8,375 energy conservation engineers employed.
The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	3,050	36.48%	76,758	77,367	609	0.79%
336 Transportation equipment manufacturing	1,175	14.06%	646	566	-80	-12.38%
333 Machinery manufacturing	800	9.57%	2,035	1,828	-207	-10.17%
221 Utilities	660	7.89%	180	281	101	56.11%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- There is considerable mobility between mechanical engineering specializations at the less senior levels
- Engineers often work in a multidisciplinary environment and acquire knowledge and skills through work experience that may allow them to practise in associated areas of science, engineering, sales, marketing or management
- Mechanical engineers work closely with civil, electrical, aerospace, chemical, industrial and other engineers, and mobility is possible between some fields of specialization in these disciplines

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Industrial and manufacturing engineers (2141)
- Aerospace engineers (2146)
- Mechanical engineering technologists and technicians (2232)
- Industrial engineering and manufacturing technologists and technicians (2233)
- Drafting technologists and technicians (2253)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

GE Water & Process Technologies

3239 Dundas Street West
Oakville, Ontario L6M 4B2
Telephone: 1 905 465 3030
Fax: 1 905 465 3050
www.gewater.com

Mobile Climate Control Inc.

7540 Jane St.
Vaughan, Ontario L4K 0A6
Telephone: 1 905 482 2750
Fax: 1 905 482 2751
www.mcc-hvac.com

Metcon Sales and Engineering Ltd.

15 Connie Crescent, Unit 3
Concord, Ontario L4K 1L3
Telephone: 1 905 738 2355
Fax: 1 905 738 5520
www.metconeng.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Biologist

NOC 2121

Environmental biologists and related scientists conduct basic and applied research to extend knowledge of living organisms, to manage natural resources, and to develop new practices and products related to medicine and agriculture. They may focus on how to protect and restore biodiversity and how to minimize human impacts on the natural world.¹

Places of Employment¹:

- Government
- Environmental consulting companies
- Resource and utility companies
- Chemical, pharmaceutical and biotechnical companies
- Health and educational institutions

Employment Requirements¹:

- A bachelor's degree in biology or in a related discipline is required for biologists
- A master's or doctoral degree in biology or a related discipline is required for employment as a research scientist in biology
- Post-doctoral research experience is usually required before employment in academic departments or research institutions

Local Educational Programs:

Program	Length	Certification	Institutions
Environment and Science	4 years	Bachelor of Science	University of Toronto
Environmental Biology	4 years	Bachelor of Science	University of Toronto

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Numeracy
- Thinking skills

The most important High School subjects are³:

- English
- Math
- Biology
- Chemistry
- Physics

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	40	75	15	130
25 – 44 years	420	680	170	1,270
45 years and over	190	280	100	570
Total Employees	650	1,035	285	1,970
% 45 years +	29.23%	27.05%	35.09%	28.93%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 64,689
Toronto	\$ 64,644
York Region Brad WG	\$ 64,702
Ontario	\$ 65,007

Environmental Biologist

NOC 2121

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 1,970 environmental biologists employed.

The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	585	29.77%	76,758	77,367	609	0.79%
622 Hospitals	390	19.85%	100	82	-18	-18.00%
325 Chemical manufacturing	150	7.63%	881	690	-191	-21.68%
912 Provincial and territorial public administration	145	7.38%	45	243	198	440.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Biological technologists and technicians (2221)
- Medical laboratory technologists and pathologists' assistants (3211)
- Medical laboratory technicians (3212)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Nir Technologies Inc

1312 Fairmeadow Trail
Oakville, Ontario L6M 2M2
Telephone: 1 905 469 6767
www.nirtechnologies.com

Biochem Environmental Solutions Inc.

91 Milvan Drive, Unit 10,11
North York, Ontario M9L 1Z7
Telephone: 1 905 747 6600
Fax: 1 905 747 6622
www.biochemenvironmental.com

Pontarolo Engineering

231 Millway Ave., Unit 16
Concord, Ontario L4K 3W7
Telephone: 1 905 669 8190
Fax: 1 905 669 6354
www.pontarolo.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Chemical Engineer

NOC 2134

Chemical engineers research, design, and develop chemical processes and equipment, oversee the operation and maintenance of industrial chemical, plastics, pharmaceutical, resource, pulp, and food processing plants and perform duties related to chemical quality control, and biochemical or biotechnical engineering. Environmental chemical engineers also study how chemicals enter the environment and what effects they have. They are often involved in promoting environmental sustainability, conservation, and protection, as well as in formulating regulations to protect the environment.¹

Places of Employment¹:

- Manufacturing and process industries
- Consulting firms
- Government
- Research and educational institutions

Employment Requirements¹:

- A bachelor's degree in chemical engineering or in a related engineering discipline is required
- A master's degree or doctorate in a related engineering discipline may be required
- Licensing by a provincial or territorial association of professional engineers is required to approve engineering drawings and reports and to practice as a Professional Engineer (P.Eng.)
- Engineers are eligible for registration following graduation from an accredited educational program, and after three or four years of supervised work experience in engineering and passing a professional practice examination
- Supervisory and senior positions in this unit group require experience

Local Educational Programs:

Program	Length	Certification	Institutions
Chemical Engineering	4 years, 5 year Co-op	Bachelor of Engineering	Ryerson University, University of Toronto,
Environmental Chemistry	4 years	Bachelor of Science	University of Toronto
Environmental Engineering Science Certificate	N/A	Certificate in Environmental Engineering Science	Ryerson University

The most important Essential Skills for this occupation are²:

- Reading text
- Writing text
- Document use
- Numeracy

The most important High School subjects are³:

- Math
- Sciences
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	25	10	0	35
25 – 44 years	460	440	175	1,075
45 years and over	290	320	145	755
Total Employees	775	770	320	1,865
% 45 years +	37.42%	41.56%	45.31%	40.48%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 78,943
Toronto	\$ 73,130
York Region Brad WG	\$ 67,876
Ontario	\$ 81,868

Environmental Chemical Engineer

NOC 2134

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 1,865 chemical engineers employed.

The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	745	39.84%	76,758	77,367	609	0.79%
325 Chemical manufacturing	240	12.83%	881	690	-191	-21.68%
326 Plastics and rubber products manufacturing	125	6.68%	955	785	-170	-17.80%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Chemical technologists and technicians (2211)
- Metallurgical and materials engineers (2142)
- Drafting technologists and technicians (2253)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Nycomed

435 North Service Rd. West, 1st Floor
Oakville, Ontario L6M 4X8
Telephone: 1 905 469 9333
Fax: 1 905 469 4883
www.nycomed.com

Biochem Environmental Solutions Inc.

91 Milvan Drive, Unit 10,11
North York, Ontario M9L 1Z7
Telephone: 1 905 747 6600
Fax: 1 905 747 6622
www.biochemenvironmental.com

Jaapharm Canada Inc.

510 Rowntree Dairy Road, Unit # 4
Woodbridge, Ontario L4L 8H2
Telephone: 1 905 851 7885
Fax: 1 905 856 5838
www.jaapharm.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Chemists

NOC 2112

Environmental chemists conduct research and analysis in support of industrial operations, product and process development, quality control, environmental control, medical diagnosis and treatment, biotechnology and other applications. They also conduct theoretical, experimental and applied research into basic chemical and biochemical processes to create or synthesize new products and processes.¹

Places of Employment¹:

- Research, development and quality control laboratories
- Chemical, petrochemical and pharmaceutical industries
- Mineral, metal and pulp and paper industries
- Manufacturing companies
- Utility companies
- Educational institutions
- Government

Employment Requirements¹:

- A bachelor's degree in chemistry, biochemistry or a related discipline is required
- A master's or doctoral degree is usually required for employment as a research chemist
- Licensing by a provincial association of chemists is compulsory in Quebec, and available but voluntary in Ontario and Alberta

Local Educational Programs:

Program	Length	Certification	Institutions
Chemistry	4 years	Bachelor of Science	University of Toronto
Environmental Chemistry	4 years	Bachelor of Science	University of Toronto
Environment and Science	4 years	Bachelor of Science	University of Toronto

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Computer use
- Numeracy
- Thinking skills

The most important High School subjects are³:

- Chemistry
- Physics
- Math
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	40	35	15	90
25 – 44 years	1,070	1,465	565	3,100
45 years and over	585	730	295	1,610
Total Employees	1,695	2,230	875	4,800
% 45 years +	34.51%	43.07%	17.40%	94.99%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary	based on 2006 Census Data ⁴
Peel Halton	\$ 62,291
Toronto	\$ 64,156
York Region Brad WG	\$ 65,620
Ontario	\$ 64,363

Environmental Chemists

NOC 2112

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 4,800 environmental chemists employed.
The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
325 Chemical manufacturing	2,060	42.87%	881	690	-191	-21.68%
541 Professional, scientific and technical services	1,275	26.53%	76,758	77,367	609	0.79%
414 Personal and household goods wholesaler-distributors	315	6.56%	5,324	5,233	-91	-1.71%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Mobility between occupations in this group is possible with experience
- Mobility is possible to occupations concerned with plant management, technical sales and the development and management of regulatory programs and teaching professions

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Chemical technologists and technicians (2211)
- Geological and mineral technologists and technicians (2212)
- Medical laboratory technologists and pathologists' assistants (3211)
- Medical laboratory technicians (3212)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Progressive Industrial Fluids Ltd.

2050 Elmgrove Road
Oakville, Ontario L6M 4Y5
Telephone: 1 905 334 5245
Fax: 1 905 677 2272
www.progressivefluids.com

Casco Inc.

405 The West Mall, Suite 600
Etobicoke, Ontario M9C 0A1
Telephone: 1 416 620 2300
Fax: 1 416 620 4488
www.casco.ca

Riso Pharma Tech Inc.

110 West Beaver Creek, Unit 18
Richmond Hill, Ontario L4B 1J9
Telephone: 1 905 907 7174 ext. 228
Fax: 1 905 907 5195
www.risopharma.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Consultant

NOC 4161

Environmental consultants or natural and applied science policy researchers and consultants, conduct research, prepare reports, provide consultation and advice and administer programs in a variety of areas related to the natural and applied sciences.¹

Places of Employment¹:

- Federal, provincial and municipal government
- Educational institutions
- Research organizations
- Consulting firms
- Environmental and conservation organizations
- Self employed

Employment Requirements¹:

- A bachelor's degree or college diploma in a related scientific or technical discipline is usually required for occupations in this unit group
- A master's degree in a related scientific discipline may be required

Local Educational Programs:

Program	Length	Certification	Institutions
Certificate in Sustainability	N/A	Certificate in Sustainability (CKSS)	Ryerson University
Earth Systems: Physics & the Environment	4 years	Bachelor of Science	University of Toronto
Environment and Health	4 years	Bachelor of Science	University of Toronto, York University
Environment and Behaviour	4 years	Bachelor of Science	University of Toronto
Environment and Energy	4 years	Bachelor of Science	University of Toronto
Environment and Science	4 years	Bachelor of Science	University of Toronto, York University
Environment and Society	4 years	Bachelor of Arts	University of Toronto
Environmental Biology	4 years	Bachelor of Science	University of Toronto
Environmental Chemistry	4 years	Bachelor of Science	University of Toronto
Environmental Control	N/A	Graduate Certificate	Sheridan College
Environmental Education	N/A	Certificate	Humber College
Environmental Engineering	4 years	Bachelor of Engineering	University of Toronto
Environmental Ethics	4 years	Bachelor of Arts	University of Toronto
Environmental Geography	4 years	Bachelor of Arts	University of Toronto
Environmental Geosciences	4 years	Bachelor of Science	University of Toronto
Environmental Policy and Practice	4 years	Bachelor of Arts	University of Toronto
Environmental Studies Preparation Certificate	N/A	Certificate	Centennial College
Environmental Studies Program	4 years	Bachelor of Environmental Studies Degree	York University
Environmental Technology	3 years	Diploma	Humber College
Innis Environmental Studies Programs	4 years	Bachelor of Arts Degree/Bachelor of Science	University of Toronto
Sustainable Energy	4 years	Bachelor of Engineering	University of Toronto

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Communication

The most important High School subjects are³:

- English
- Sciences
- Business
- Math

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	30	50	25	105
25 – 44 years	370	725	250	1,345
45 years and over	180	375	140	695
Total Employees	580	1,150	415	2,145
% 45 years +	31.03%	32.61%	33.73%	32.40%

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 72,303
Toronto	\$ 72,127
York Region Brad WG	\$ 56,697
Ontario	\$ 72,431

Source: Statistics Canada, 2006 Census

Environmental Consultant

NOC 4161

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 2,145 environmental consultants employed.
The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	870	40.47%	76,758	77,367	609	0.79%
912 Provincial and territorial public administration	400	18.60%	45	243	198	440.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Business Development Officers and Marketing Researchers and Consultants (NOC 4163)
- Judges, Lawyers and Quebec Notaries (NOC 411)
- Psychologists (NOC 4151)
- Managers in Public Administration (NOC 041)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Tapped In Consulting

1 Delta Park Blvd, Unit #3, 2nd Floor
Brampton, Ontario L6T 5G1
Telephone: 1 416 480 6226
Fax: 1 416 480 6226
www.tappedin.ca

Green For Life

401 Magnetic Drive, Unit # 20
Toronto, Ontario M3J 3H9
Telephone: 1 416 467 7621
www.greenforlife.ca

The Scheinman Group

80 Fulton Way, Suite 202
Richmond Hill, Ontario L4B 1J5
Telephone: 1 905 763 0028
Fax: 1 905 763 1781
www.scheinmangroup.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Engineer

NOC 2131

Environmental engineers plan, design, develop and manage projects for the construction or repair of buildings, earth structures, powerhouses, roads, airports, railways, rapid transit facilities, bridges, tunnels, canals and dams, systems related to highway and transportation services, water distribution systems, sanitation systems and more. Environmental engineers are also often involved in regulatory procedures that review facilities to ensure they are complying with environmental policies and guidelines. They may also specialize in a specific area such as solid and hazardous waste management, air or water quality, foundation analysis, building and structural inspection, surveying, geomatics and municipal planning.¹

Places of Employment¹:

- Environmental engineering consulting firms
- Federal, provincial/territorial, and municipal government departments
- Colleges, universities, and research institutes
- Property management companies
- Self-employed

Employment Requirements¹:

- A bachelor's degree in civil, environmental or chemical engineering or in a related engineering discipline
- A master's degree or doctorate in a related engineering discipline may be required
- Licensing by a provincial or territorial association of professional engineers is required to approve engineering drawings and reports and to practice as a Professional Engineer (P.Eng.)
- Engineers are eligible for registration following graduation from an accredited educational program, and after three or four years of supervised work experience in engineering and passing a professional practice examination

Local Educational Programs:

Program	Length	Certification	Institutions
Civil Engineering	4 years	Bachelor's Degree	Ryerson University, University of Toronto
Civil Engineering Technician/Technology	2 – 3 years	Diploma/ Advanced Diploma	George Brown College, Humber College, Seneca College
Environmental Engineering	4 years	Bachelor's Degree	University of Toronto
Environmental Engineering Science Certificate	N/A	Certificate	Ryerson University
Geomatics Engineering	4 years	Bachelor's Degree	York University
Industrial Engineering	4 years	Bachelor's Degree	Ryerson University, University of Toronto
Mechanical Engineering Technician/Technology	2 years	Diploma	Centennial College, George Brown College, Seneca, Sheridan College

The most important Essential Skills for this occupation are²:

- Document use
- Numeracy
- Computer use

The most important High School subjects are³:

- Mathematics
- Physics
- Chemistry
- Calculus
- Biology

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	70	120	55	245
25 – 44 years	1,115	1,785	860	3,760
45 years and over	1,065	1,500	805	3,370
Total Employees	2,245	3,405	1,710	7,360
% 45 years +	47.44%	44.05%	47.08%	45.79%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 67,048
Toronto	\$ 62,402
York Region Brad WG	\$ 75,241
Ontario	\$ 77,262

Environmental Engineer

NOC 2131

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 7,370 environmental engineers employed.

The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	4,005	54.34%	76,758	77,367	609	0.79%
236 Construction of buildings	710	9.63%	13,667	13,829	162	1.19%
913 Local, municipal and regional public administration	400	5.43%	35	56	21	60.00%
237 Heavy and civil engineering construction	315	4.27%	5,042	5,096	54	1.07%
912 Provincial and territorial public administration	260	3.53%	45	243	198	440.00%
238 Specialty trade contractors	220	2.99%	23,111	24,416	1,305	5.65%
485 Transit and ground passenger transportation	140	1.90%	3,455	3,943	488	14.12%
221 Utilities	110	1.49%	180	281	101	56.11%
332 Fabricated metal product manufacturing	100	1.36%	3,024	2,586	-438	-14.48%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- There is considerable mobility between civil engineering specializations at the less senior levels
- Engineers often work in a multidisciplinary environment and acquire knowledge and skills through work experience that may allow them to practice in associated areas of science, engineering, urban planning, sales, marketing or management
- Supervisory and senior positions in this unit group require experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Land Surveyors (2154)
- Civil Engineering Technologists and Technicians (2231)
- Mechanical Engineering Technologists and Technicians (2232)
- Industrial Engineering and Manufacturing Technologists and Technicians (2233)
- Construction Estimators (2234)
- Architectural Technologists and Technicians (2251)
- Drafting Technologists and Technicians (2253)
- Land Survey Technologists and Technicians (2254)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

AMEC

2020 Winston Park Drive, Suite 700, Oakville, Ontario L6H 6X7
Telephone: 1 905 829 5400 Fax: 1 905 829 5401
www.amec.com

Genivar

60 Harbour Street, Floor 4, Toronto, Ontario, M5J 1B7
Telephone: 1 416-977-9666 Fax: 1 416-977-9662
www.genivar.com

Jagger Hims Limited

1091 Gorham Street, Suite 301, Newmarket, Ontario L3Y 8X7
Telephone: 1 905 853 3303 Fax: 1 905 853 1759
www.jaggerhims.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca. Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Engineering Managers

NOC 0211

Environmental engineering managers plan, organize, direct, control and evaluate the activities of an engineering department, service or firm. They work to ensure that all applicable legislative requirements are fulfilled. They are also involved in activities such as environmental awareness projects, sustainable development, fundraising, and public consultation programs. Environmental engineering managers also manage and oversee the work of others and may be involved in training personnel on environmental issues. They require a broad understanding of environmental issues combined with expertise and a lot of experience in project development and management.¹

Places of Employment¹:

- Governments
- Engineering firms

Employment Requirements¹:

- A bachelor's degree in engineering or a college diploma in engineering technology
- Extensive experience in an engineering discipline, including supervisory experience
- Registration as a Professional Engineer (P. Eng.) by a provincial or territorial association of professional engineers or certification as an engineering technologist (CET) is usually required

Local Educational Programs:

Program	Length	Certification	Institutions
Biomedical Engineering Technology	3 years	Advanced Diploma	Centennial College
Chemical Engineering	4 years, 5 year Co-op	Bachelor of Engineering	Ryerson University, University of Toronto, Seneca College, Sheridan College
Civil Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University, University of Toronto
Civil Engineering Technology	3 years	Advanced Diploma	George Brown College
Construction Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma (3 yrs)	George Brown College
Electrical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University
Electronics Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma (3 yrs)	Centennial College, George Brown College, Humber College, Seneca College, Sheridan College
Energy Systems Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma(3 yrs)	Centennial College
Environmental Engineering Science Certificate	N/A	Certificate in Environmental Engineering Science	Ryerson University
Environmental Systems Engineering	3 years	Advanced Diploma	Humber College
Industrial Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University
Mechanical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University
Mechanical Engineering	2 years (technician) 3 years (technology)	Diploma Advanced Diploma(3 yrs)	Centennial College, George Brown College, Sheridan College

The most important Essential Skills for this occupation are²:

- Reading text
- Computer use
- Writing

The most important High School subjects are³:

- Math
- Sciences

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	0	15	10	25
25 – 44 years	685	590	515	1,790
45 years and over	790	600	540	1,930
Total Employees	1,475	1,205	1,065	3,745
% 45 years +	53.56%	49.79%	50.70%	51.54%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 119,213
Toronto	\$ 119,106
York Region Brad WG	\$ 120,214
Ontario	\$ 116,455

Environmental Engineering Managers

NOC 0211

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are a total of 3,745 environmental engineering managers employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	1,015	27.10%	76,758	77,367	609	0.79%
336 Transportation equipment manufacturing	470	12.55%	646	566	-80	-12.38%
334 Computer and electronic product manufacturing	265	7.08%	1,074	874	-200	-18.62%
333 Machinery manufacturing	190	5.07%	2,035	1,828	-207	-10.17%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Mobility to other technical managerial positions or to research or senior management positions is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Civil, Mechanical, Electrical and Chemical Engineers (NOC 213)
- Architects, Urban Planners and Land Surveyors (NOC 215)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

SPG Engineering Group Ltd.

34 Rebecca Street
Oakville, Ontario L6K 1J1
Telephone: 1 905 338 6662
Fax: 1 905 338 9932
www.spg-eng.com

Vanbetlehem Architect Inc.

1440 Hurontario Street, Suite 201
Mississauga, Ontario L5G 3H4
Telephone: 1 905 274 2444
Fax: 1 905 274 2448
www.vanbetlehem.com

M-Tech Engineering & Management Services Inc.

334 Waterside Cres.
Maple, Ontario L6A 1V4
Telephone: 1 905 417 1899
Fax: 1 416 259 3616
www.mtechinc.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Geologist

NOC 2113

Environmental geologists, geochemists and geophysicists conduct programs of exploration and research to extend knowledge of the structure, composition and processes of the earth, to locate and identify hydrocarbon, mineral and groundwater resources and to plan and implement programs of hydrocarbon and mineral extraction. Environmental geologists also examine the effects of urban and industrial development and waste disposal projects on the environment and are vital to finding successful strategies for minimizing the negative effects of growth.¹

Places of Employment¹:

- Petroleum and mining companies
- Consulting geology, geophysics and engineering firms
- Governments
- Educational institutions
- Self employed

Employment Requirements¹:

- A university degree in geology, geochemistry, geophysics or a related discipline is required
- A master's or doctoral degree in geophysics, physics, mathematics or engineering may be required for employment as a geophysicist
- Registration as a professional geologist or professional geophysicist by a provincial or territorial association of professional engineers or geologists and geophysicists may be required

Local Educational Programs:

Program	Length	Certification	Institutions
Earth Systems: Physics & the Environment	4 years	Bachelor of Science	University of Toronto
Environmental Geosciences	4 years	Bachelor of Science	University of Toronto
Environmental Science Program	4 years	Bachelor of Science	York University
Geology	4 years	Bachelor of Science	University of Toronto

The most important Essential Skills for this occupation are²:

- Document use
- Numeracy
- Computer use

The most important High School subjects are³:

- Chemistry
- Physics
- Math
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	0	0	0	0
25 – 44 years	95	125	30	250
45 years and over	190	165	75	430
Total Employees	285	290	105	680
% 45 years +	66.67%	56.90%	71.43%	63.24%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 134,171
Toronto	\$ 78,071
York Region Brad WG	\$ 105,817
Ontario	\$ 86,287

Environmental Geologist

NOC 2113

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 680 environmental geologists employed.

The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	380	55.88%	76,758	77,367	609	0.79%
213 Support activities for mining and oil and gas extraction	105	15.44%	341	338	-3	-0.88%
212 Mining (except oil and gas)	95	13.97%	70	76	6	8.57%

Source: Statistics Canada, 2006 Census; Statistics Canada, Canadian Business Patterns Data, December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Geological and mineral technologists and technicians (2212)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Dillon Consulting

1155 North Service Road West, Unit 14
Oakville, Ontario L6M 3E3
Telephone: 1 905 901 2912
Fax: 1 905 901 2918
www.dillon.ca

Toronto and Region Conservation

5 Shoreham Drive
Downsview, Ontario M3N 1S4
Telephone: 1 416 661 6600
Fax: 1 416 661 6898
www.trca.on.ca

Altech Environmental Consulting Ltd.

12 Banigan Drive,
Toronto, Ontario, M4H 1E9
Telephone: 1 416 467 5555
Fax: 1 416 467 9824
www.altech-group.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data, December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Health Officer

NOC 2263

Environmental health officers evaluate and monitor health and safety and develop strategies for protecting public health. They administer and enforce provincial legislation related to environmental health and provide support to minimize health and safety hazards. They inspect restaurants, public facilities, industrial establishments, municipal water systems and other workplaces to ensure compliance with government regulations regarding sanitation, pollution control, the handling and storage of hazardous substances and workplace safety. Environmental health officers are focused on prevention, consultation, investigation, and education of the community regarding health risks and maintaining a safe environment.¹

Places of Employment¹:

- National, provincial and municipal governments
- Hospitals
- Educational institutions
- Consulting firms
- Self employed

Employment Requirements¹:

- A bachelor's degree or college diploma in a discipline such as food science, environmental studies, chemistry or health and safety is usually required
- In some establishments, several years of related work experience and the completion of in-house training courses may substitute for formal education
- Public health inspectors employed outside Quebec require certification with the Canadian Institute of Public Health Inspectors
- Occupational health and safety officers may require certification with the Association for Canadian Registered Safety Professionals

Local Educational Programs:

Program	Length	Certification	Institutions
Environment & Health	4 years	Bachelor of Science	University of Toronto
Environmental Public Health Leadership Certificate	N/A	Certificate in Environmental Public Health Leadership	Ryerson University
Environmental and Health Studies	4 years	Bachelor of Arts	York University

The most important Essential Skills for this occupation are²:

- Oral communication
- Problem solving
- Document use
- Working with others

The most important High School subjects are³:

- Math
- Physics
- Mechanics
- Chemistry
- Biology

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	30	45	25	100
25 – 44 years	630	515	135	1,280
45 years and over	395	330	145	870
Total Employees	1,055	890	305	2,250
% 45 years +	37.44%	37.08%	47.54%	38.67%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 60,312
Toronto	\$ 64,807
York Region Brad WG	\$ 76,330
Ontario	\$ 65,066

Environmental Health Officer

NOC 2263

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 2,250 environmental health officers employed.
The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
913 Local, municipal and regional public administration	405	17.84%	35	56	21	60.00%
912 Provincial and territorial public administration	300	13.22%	45	243	198	440.00%
541 Professional, scientific and technical services	210	9.25%	76,758	77,367	609	0.79%
911 Federal government public administration	100	4.41%	8	36	28	350.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Medical Technologists and Technicians (Except Dental) (NOC 321)
- Aircraft Mechanics and Aircraft Inspectors (NOC 7315)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

The Town of Oakville

1225 Trafalgar Road, P.O. Box 310
Oakville, Ontario L6J 5A6
Telephone: 1 905 845 6601
Fax: 905 815 2001
www.oakville.ca

City of Vaughn

2141 Major Mackenzie Dr.
Maple, Ontario L6A 1T1
Telephone: 1 905 832 8585 Ext: 8521
Fax: 1 905 832 6248
www.vaughan.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Environmental Technician/Technologist

NOC 2231

Environmental technicians and technologists provide technical support and services to scientists, engineers and other professionals, or may work independently in fields such as structural engineering, municipal engineering, construction design and supervision, highways and transportation engineering, water resources engineering, geotechnical engineering and environmental protection. They mainly work to prevent, control, and eliminate environmental hazards by inspecting, testing, decontaminating, and operating equipment used to control and remediate environmental pollution. Environmental technicians and technologists also monitor compliance with environmental regulations regarding asbestos, lead, waste-water, and other substances.¹

Places of Employment¹:

- Consulting companies
- Engineering companies
- Construction companies
- Public works, transportation departments and other government

Employment Requirements¹:

- Completion of a two- or three-year college program in civil engineering technology or a closely related discipline is usually required for civil engineering technologists
- Completion of a one- or two-year college program in civil engineering technology is usually required for civil engineering technicians
- Certification in civil engineering technology or in a related field is available through provincial associations of engineering/applied science technologists and technicians and may be required for some positions
- A period of supervised work experience, usually two years, is required before certification

Local Educational Programs:

Program	Length	Certification	Institutions
Civil Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University, University of Toronto
Civil Engineering Technology	3 years	Advanced Diploma	George Brown College, Humber College, Seneca College
Environmental Engineering	4 years	Bachelor of Engineering	University of Toronto
Environmental Engineering Science Certificate	N/A	Certificate in Environmental Engineering Science	Ryerson University
Energy Systems Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma/Advanced Diploma (3 yrs)	Centennial College
Environmental Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Seneca College

The most important Essential Skills for this occupation are²:

- Document use
- Numeracy
- Computer use

The most important High School subjects are³:

- Math
- Physics
- Chemistry
- Drafting
- Blueprint Reading

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	75	90	100	265
25 – 44 years	155	320	55	530
45 years and over	135	115	90	340
Total Employees	365	525	245	1135
% 45 years +	36.99%	21.90%	36.73%	29.96%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary	based on 2006 Census Data ⁴
Peel Halton	\$ 59,776
Toronto	\$ 53,633
York Region Brad WG	\$ 58,707
Ontario	\$56,294

Environmental Technician/Technologist

NOC 2231

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are a total of 1,135 environmental technicians and technologists employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	530	46.70%	76,758	77,367	609	0.79%
913 Local, municipal and regional public administration	190	16.74%	35	56	21	60.00%
236 Construction of buildings	80	7.05%	13,667	13,829	162	1.19%
238 Specialty trade contractors	35	3.08%	23,111	24,416	1,305	5.65%
322 Paper manufacturing	35	3.08%	363	279	-84	-23.14%
912 Provincial and territorial public administration	35	3.08%	45	243	198	440.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- There is mobility to related occupations, such as drafting technologists and technicians and construction inspectors and estimators
- Progression to construction supervisors or construction managers is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Civil engineering technologists and technicians (2231)
- Mechanical engineering technologists and technicians (2232)
- Industrial engineering and manufacturing technologists and technicians (2233)
- Drafting technologists and technicians (2253)
- Land survey technologists and technicians (2254)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Arjay Engineering Ltd.
2851 Brighton Rd., Oakville, Ontario L6H 6C9
Telephone: 1 905 829 2418
Fax: 1 905 829 4701
www.arjayeng.com

ARCO Engineering Inc.
173 Benjamin Boake Trail, Toronto, Ontario M3J 3C9
Telephone: 1 416 635 1321
Fax: 1 416 635 2978
www.arcoengineering.ca

Wardrop
15-250 Shields Court, Markham, Ontario L3R 9W7
Telephone: 1 905 470 6570
Fax: 1 905 470 0958
www.wardrop.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Forestry Technologists and Technicians

NOC 2223

Forestry technologists and technicians may work independently or perform technical and supervisory functions in support of forestry research, forest management, forest harvesting, forest resource conservation and environmental protection.¹

Places of Employment¹:

- Forest industry companies
- Provincial and federal governments
- Consulting firms
- Self employed

Employment Requirements¹:

- Completion of a one- to three-year college program in forestry technology or in a renewable resource program or forest ranger program is usually required
- Certification by, or registration with, a provincial association as a forestry technologist or technician may be required
- Certification or licensing as a scaler is required for some positions

Local Educational Programs:

Program	Length	Certification	Institutions
Arborist	N/A	Apprenticeship	Humber College
Botany	4 years	Bachelor of Science	University of Toronto
Certificate in Sustainability		Certificate in Sustainability (CKSS)	Ryerson University
Conservation Ecology	4 years	Bachelor of Science	York University
Ecosystem Management	4 years	Bachelor in Environmental Studies	York University
Forest Biomaterials Science	4 years	Bachelor of Science	University of Toronto
Forest Conservation Science	4 years	Bachelor of Science	University of Toronto
Horticultural Science	N/A	Certificate	Humber College, Sheridan College
Landscape Technician Program	2 years	Diploma	Humber College
Urban Arboriculture-Tree Care	1 year	Certificate	Humber College

The most important Essential Skills for this occupation are²:

- Reading text
- Document use
- Writing
- Numeracy

The most important High School subjects are³:

- Sciences
- English
- Math

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	0	0	10	10
25 – 44 years	10	30	10	50
45 years and over	0	0	15	15
Total Employees	10	30	35	75
% 45 years +	0.00%	0.00%	42.85%	0.20%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	No data
Toronto	No data
York Region Brad WG	No data
Ontario	\$ 52,028

Forestry Technologists and Technicians

NOC 2223

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 75 forestry technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
913 Local, municipal and regional public administration	20	26.67%	35	56	21	60.00%
221 Utilities	15	20.00%	180	281	101	56.11%

Source: Statistics Canada, 2006 Census; Statistics Canada, Canadian Business Patterns Data, December 2003, June 2009.

Additional Information¹:

- Mobility may be possible to occupations in natural resource and wildlife management and in parks management

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Hall Tree Farms Inc.

16725 Jane Street
Kettleby, Ontario L0G 1J0
Telephone: 1 905 727 1996
Fax: 1 905 841 6117
www.halltreefarms.com

Cold Creek Forest and Wildlife Area

7785-17th Sideroad
Schomberg, Ontario L0G 1T0
Telephone: 1 905 859 4749
Fax: 1 416 667 6275
www.coldcreek.org

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Geological and Mineral Technologists and Technicians

NOC 2212

Geological and mineral technologists and technicians provide technical support and services or may work independently in the fields of oil and gas exploration and production, geophysics, petroleum engineering, geology, mining and mining engineering, mineralogy, extractive and physical metallurgy, metallurgical engineering and environmental protection.¹

Places of Employment¹:

- Government
- Educational institutions
- Research and development and quality control laboratories
- Engineering/geological consulting firms
- Petroleum/mining companies
- Chemical, petrochemical, pharmaceutical, and other manufacturing/processing industries
- Utilities companies

Employment Requirements¹:

- Geological and mineral technologists usually require completion of a two- to three-year college program in geological technology, petroleum technology, petroleum engineering technology, hydrogeology or groundwater technology, mining technology, mining engineering technology, mineralogy, metallurgical technology, or welding technology
- Geophysics technologists usually require completion of a two- to three-year college program in electronics technology
- Geological and mineral technicians usually require completion of a one- to two-year college program in a related field
- Certification in geological and mineral technology or in a related field is available through provincial associations of engineering/applied science technologists and technicians and may be required by some employers
- A period of supervised work experience, usually two years, is required before certification

Local Educational Programs:

Program	Length	Certification	Institutions
Geology	4 years	Bachelor of Science	University of Toronto

The most important Essential Skills for this occupation are²:

- Document use
- Numeracy
- Computer use

The most important High School subjects are³:

- Sciences
- Math
- Computer-related courses
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	30	15	10	55
25 – 44 years	85	45	30	160
45 years and over	95	120	45	260
Total Employees	210	180	85	475
% 45 years +	45.24%	66.67%	52.94%	54.74%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 55,600
Toronto	\$ 50,614
York Region Brad WG	\$ 51,135
Ontario	\$ 58,738

Geological and Mineral Technologists and Technicians

NOC 2212

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are a total of 475 geological and mineral technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	250	51.02%	76,758	77,367	609	0.79%
213 Support activities for mining and oil and gas extraction	45	9.18%	341	338	-3	-0.88%
212 Mining (except oil and gas)	35	7.14%	70	76	6	8.57%

Source: Statistics Canada, 2006 Census; Statistics Canada, Canadian Business Patterns Data, December 2003, June 2009.

Additional Information¹:

- There is limited mobility between occupations in this group
- Mobility may be possible between geophysical technology and electronic technology
- Mobility may be possible between some occupations in this group and related fields of civil engineering technology

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Chemical Technologists and Technicians (NOC 2211)
- Physical Science Professionals (NOC 211)
- Medical Laboratory Technologists and Pathologists' Assistants (NOC 3211)
- Medical Laboratory Technicians (NOC 3212)
- Supervisors, Processing Occupations (NOC 921)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Zarpac Inc.

1185 North Service Road East, Oakville, Ontario L6H 1A7
Telephone: 1 905 338 8880
Fax: 1 905 338 3521
www.zarpac.com

Martech Group Inc.

50 Paxman Road, Unit #18, Etobicoke, Ontario M9C 1B7
Telephone: 1 416 291 4663
Fax: 1 888 284 8253
www.martechgroup.ca

LGI Consulting Engineers Inc

588 Edward Avenue, Unit 49, Richmond Hill, Ontario L4C 9Y6
Telephone: 1 905 884 0911
Fax: 1 905 884 0790
www.lgiengineers.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data, December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Information Systems Analysts and Consultants

NOC 2171

Information systems analysts and consultants conduct research, develop and implement information systems development plans, policies and procedures, and provide advice on a wide range of information systems issues.¹

Places of Employment¹:

- Information technology consulting firms
- Information technology units throughout public and private sectors
- Self employed

Employment Requirements¹:

- A bachelor's degree in computer science, computer systems engineering, software engineering, business administration or a related discipline or completion of a college program in computer science is usually required
- Experience as a computer programmer is usually required
- Certification or training provided by software vendors may be required by some employers

Local Educational Programs:

Program	Length	Certification	Institutions
Computer Science	4 years	Bachelor of Computer Science	Ryerson University, University of Toronto, York University
Electrical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University
Electronics Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, Humber College, Seneca College, Sheridan College
Electromechanical Engineering Technician/Technology	2 years regular 3 years Co-op	Diploma Advanced Diploma	Centennial College, George Brown College, Sheridan College

The most important Essential Skills for this occupation are²:

- Computer use
- Reading text
- Writing
- Document use
- Oral communication

The most important High School subjects are³:

- Computer related courses
- Industrial arts
- Math
- Business

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	515	940	365	1,820
25 – 44 years	7,885	13,745	5,700	27,330
45 years and over	3,565	5,695	3,360	12,620
Total Employees	11,965	20,380	9,425	41,770
% 45 years +	29.80%	27.94%	35.65%	30.21%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 73,258
Toronto	\$ 69,368
York Region Brad WG	\$ 74,453
Ontario	\$ 71,252

Information Systems Analysts and Consultants

NOC 2171

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 41,770 information systems analysts and consultants employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	18,480	44.23%	76,758	77,367	609	0.79%
522 Credit intermediation and related activities	5,525	13.22%	4,745	4,119	-626	-13.19%
417 Machinery, equipment and supplies wholesaler-distributors	2,770	6.63%	6,146	5,567	-579	-9.42%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Computer Engineers (Except Software Engineers and Designers) (NOC 2147)
- Software Engineers and Designers (NOC 2173)
- Computer Programmers and Interactive Media Developers (NOC 2174)
- Web Designers and Developers (NOC 2175)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Mico Systems Inc.

740 Weller Court, Unit A
Oakville, Ontario L6K 3S9
Telephone: 1 905 842 2994
Fax: 1 905 842 3936
www.micosystems.com

Voloper Creations Inc.

3100 Steeles Avenue West, Suite 400
Concord, Ontario L4K3R1
Telephone: 1 905 660 1481 ext. 226
Fax: 1 905 660 6053
www.voloper.com

Perpetual Connections

1852 Queen street E, Unit 200
Toronto, Ontario M4L 1H1
Telephone: 1 416 482 2854 ext. 3
Fax: 1 416 621 6555
www.perpetualconnections.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Land Survey Technologists and Technicians

NOC 2254

Land survey technologists and technicians conduct or participate in surveys to determine the exact locations and relative positions of natural features and other structures on the earth's surface, underground and underwater. The measurements and other detailed information gathered by land survey technologists and technicians are essential for surveyors, engineers, lawyers, planners, scientists, developers, and others. This data is utilized before construction of any kind takes place, whether of homes, parking lots, dams, highways, pipelines, and wells.¹

Places of Employment¹:

- Government
- Architectural/construction companies
- Utility companies
- Manufacturing companies
- Design, surveying and mapping firms

Employment Requirements¹:

- Completion of secondary school is usually required
- Completion of a two- to three-year college program in geomatics or survey technology is usually required for survey technologists
- Completion of a one- to two-year college program in geomatics or survey technology is usually required for survey technicians
- Certification by provincial associations of technicians and technologists may be required by some employers

Local Educational Programs:

Program	Length	Certification	Institutions
Applied Digital Geography and GIS Certificate	N/A	Certificate in Applied Digital Geography and GIS	Ryerson University
Architectural Science	4 years	Bachelor of Architectural Science	Ryerson University
Civil Engineering	4 years	Bachelor's Degree	Ryerson University, University of Toronto
Civil Engineering Technician/Technology	2 – 3 years	Diploma/Advanced Diploma	George Brown College, Humber College, Seneca College
Geographic Analysis	4 years	Bachelor of Arts in Geographic Analysis	Ryerson University
Geographic Information Systems	4 years	Bachelor of Arts	University of Toronto
Geographic Information Systems & Remote Sensing Certificate	1 year	Certificate in GIS and Remote Sensing	York University
Mechanical Engineering Technician/Technology – Design and Drafting	2 years regular 3 years Co-op	Diploma Advanced Diploma	Sheridan College
Urban and Regional Planning	4 years	Bachelor of Urban and Regional Planning	Ryerson University

The most important Essential Skills for this occupation are²:

- Document use
- Numeracy
- Decision making

The most important High School subjects are³:

- Math
- Computer-related courses
- Sciences
- Drafting
- Blueprint reading

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	25	30	25	80
25 – 44 years	0	25	10	35
45 years and over	25	20	10	55
Total Employees	50	75	45	170
% 45 years +	0.85%	26.67%	22.22%	32.35%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 52,447
Toronto	\$ 45,823
York Region Brad WG	No data
Ontario	\$ 44,410

Land Survey Technologists and Technicians

NOC 2254

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are a total of 175 land survey technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	90	51.43%	76,758	77,367	609	0.79%
913 Local, municipal and regional public administration	55	31.43%	35	56	21	60.0%
236 Construction of buildings	10	5.71%	13,667	13,829	162	1.19%
237 Heavy and civil engineering construction	10	5.71%	5,042	5,096	54	1.07%
561 Administrative and support services	10	5.71%	20,942	19,811	-1,131	-5.40%
911 Federal government public administration	10	5.71%	8	36	28	350.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Mobility is possible between the various occupations in this unit group
- Progression to supervisory positions is possible with experience
- Progression to land surveyor position is possible with completion of professional surveyor examinations and certification

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Drafting Technologists and Technicians (NOC 2253)
- Architects, Urban Planners and Land Surveyors (NOC 215)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

A W Hooker Associates Ltd.

2896 South Sheridan Way, Oakville, Ontario L6J 7G9

Telephone: 1 905 829 9436

Fax: 1 905 829 9440

www.awhooker.com

Build Max Limited

1244A Bloor Street West, Toronto, Ontario M6H 1N5

Telephone: 1 416 588 6999

Fax: 1 416 588 1433

www.buildmaxltd.ca

Krcmar Surveyors Ltd.

1137 Centre Street, Thornhill, Ontario L4J 3M6

Telephone: 1 905 738 0053

Fax: 1 905 738 9221

www.krcmar.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Landscape and Horticulture Technicians and Specialists

NOC 2225

Landscape and horticulture technicians and specialists survey and assess landscapes; draw sketches and build models of landscape designs; construct and maintain gardens, parks, golf courses and other landscaped environments; advise clients on issues related to horticulture; breed, cultivate and study plants; and treat injured and diseased trees and plants.¹

Places of Employment¹:

- Landscape designers and contractors
- Lawn service and tree care establishments
- Golf courses
- Nurseries and greenhouses
- Municipal, provincial and national parks
- Self employed

Employment Requirements¹:

- Completion of a university or college program in agronomy, arboriculture, horticulture, landscaping, landscape design or landscape technology is usually required
- Experience as a landscape and grounds maintenance labourer may be required for golf course superintendents, landscape gardeners and landscapers
- An apprenticeship program is available for horticulturists, arboriculturists and landscape gardeners
- A provincial licence to apply chemical fertilizers, fungicides, herbicides and pesticides may be required

Local Educational Programs:

Program	Length	Certification	Institutions
Botany	4 years	Bachelor of Science	University of Toronto
Ecosystem Management	4 years	Bachelor in Environmental Studies	York University
Landscape Design	N/A	Certificate	Humber College
Landscape Technician Program	2 years	Diploma	Humber College
Horticultural Studies	N/A	Certificate	Sheridan College, Humber College
Urban Ecologies Certificate	1 years	Certificate in Urban Ecologies	York University
Urban Arboriculture-Tree Care	1 year	Certificate	Humber College

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Oral communication
- Thinking skills

The most important High School subjects are³:

- Sciences
- Math
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	65	60	70	195
25 – 44 years	295	310	245	850
45 years and over	120	225	55	400
Total Employees	480	595	370	1,445
% 45 years +	25.00%	37.82%	14.86%	27.68%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 51,040
Toronto	\$ 45,588
York Region Brad WG	\$ 42,182
Ontario	\$ 43,693

Landscape and Horticulture Technicians and Specialists

NOC 2225

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 1,445 landscape and horticulture technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
561 Administrative and support services	595	41.18%	20,942	19,811	-1,131	-5.40%
541 Professional, scientific and technical services	230	15.92%	76,758	77,367	609	0.79%
913 Local, municipal and regional public administration	210	14.53%	35	56	21	60.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Forestry Technologists and Technicians (NOC 2223)
- Landscape Architects (NOC 2152)
- Biological Technologists and Technicians (NOC 2221)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Clintar Landscape Management

1151 Heritage Road, Station Main
Burlington, Ontario L7L 4Y1
Telephone: 1 905 332 8800
Fax: 1 905 332 8803
www.clintar.com

Nectar Landscaping

4 Burnley Ave.
Scarborough, Ontario M1R 2M4
Telephone: 1 416 565 9217
www.nectarlandscaping.ca

Walter's Landscaping

10 Ruggles Avenue
Thornhill, Ontario L3T 3S5
Telephone: 1 905 889 2691
Fax: 1 905 889 8791
www.walterslandscaping.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Machining Tool Operators

NOC 9511

Machining tool operators study job orders and interpret blueprints to determine machining operations to be performed. They set up and operate or tend metal-cutting machines designed for repetitive machining work. People in this occupational group also etch or chemically mill metal pieces.¹

Places of Employment¹:

- Machine shops
- Metal product companies
- Other manufacturing companies

Employment Requirements¹:

- Some secondary school education is required
- College or other courses in machining may be required
- Several months of on-the-job training are provided
- Senior positions in this unit group, such as set-up operator, require experience as a machine operator

Local Educational Programs:

Program	Length	Certification	Institutions
Mechanical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University, University of Toronto
Mechanical Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, George Brown College, Sheridan College

Local Union and Training Centre

Labourers Local 506

1600 Major MacKenzie Dr. East, Richmond Hill, Ontario L4S 1P4
Tel: 905-883-4268

Sheet Metal Workers Local 285

234 Atwell Drive, Etobicoke, Ontario M9W 5A3
Tel: 416-249-9626

The most important Essential Skills for this occupation are²:

- Numeracy
- Computer use

The most important High School subjects are³:

- Machine shop
- Blueprint reading
- Computer basics
- Math

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	240	230	95	565
25 – 44 years	1,515	1,960	640	4,115
45 years and over	1,190	1,680	410	3,280
Total Employees	2,945	3,870	1,145	7,960
% 45 years +	40.41%	43.41%	35.81%	41.21%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ¹	
Peel Halton	\$ 42,726
Toronto	\$ 39,778
York Region Brad WG	\$ 46,280
Ontario	\$ 45,064

Machining Tool Operators

NOC 9511

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are a total of 7,960 machining tool operators employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
336 Transportation equipment manufacturing	3,105	38.98%	646	566	-80	-12.38%
332 Fabricated metal product manufacturing	2,555	32.08%	3,024	2,586	-438	-14.48%
333 Machinery manufacturing	1,045	13.12%	2,035	1,828	-207	-10.17%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Experienced machining tool operators may become machinists or tool and die makers through apprenticeship training

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Machining, Metalworking, Woodworking and Related Machine Operators (NOC 951)
- Machinists and Machining and Tooling Inspectors (NOC 7231)
- Tool and Die Makers (NOC 7232)
- Metalworking Machine Operators (NOC 9514)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Goodrich Landing Gear
1400 South Service Road West
Oakville, Ontario L6L 5Y7
Telephone: 1 905 827 7777
Fax: 1 905 825 1583
www.aerospace.goodrich.com

Microtex Lab Inc.
88 Crockford Blvd., Unit #1
Scarborough, Ontario M1R 5B6
Telephone: 1 416 285 7999
Fax: 1 416 285 1779
www.madeinsteell.com

Boss Steel Limited
565 Edward Ave North
Richmond Hill, Ontario L4W 9W8
Telephone: 1 905 508 8225
Fax: 1 905 508 8475
www.bossteel.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Mapping and Related Technologists and Technicians

NOC 2255

Mapping and related technologists and technicians gather, analyze, interpret and use geospatial information for applications in natural resources, geology, environment and land use planning. This unit group includes technologists and technicians who design and prepare maps, interpret aerial photographs, operate interpretative and airborne remote sensing equipment, and develop and operate geographical information systems.¹

Places of Employment¹:

- Government
- Armed forces
- Utilities companies
- Mapping companies
- Computer software companies
- Forestry companies
- Architectural companies
- Engineering firms
- Consulting companies

Employment Requirements¹:

- Completion of secondary school is required
- Technologists in this unit group require completion of a two- to three-year college program in cartography, photogrammetry, aerial survey, remote sensing, geographic information system or geomatics
- Technicians in this unit group require completion of a one- to two-year college program in cartography, photogrammetry, aerial survey, remote sensing, geographic information system or geomatics

Local Educational Programs:

Program	Length	Certification	Institutions
Applied Digital Geography and GIS Certificate	N/A	Certificate in Applied Digital Geography and GIS	Ryerson University
Environmental Geosciences	4 years	Bachelor of Science	University of Toronto
Geographic Analysis	4 years	Bachelor of Arts in Geographic Analysis	Ryerson University
Geographic Information Systems	4 years	Bachelor of Arts	University of Toronto
Geomatics Engineering	4 years	Bachelor of Applied Science	York University

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Computer use
- Numeracy
- Thinking skills

The most important High School subjects are³:

- Math
- Computer related courses
- Graphic design
- Drafting
- Sciences

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	25	25	0	50
25 – 44 years	140	205	85	430
45 years and over	45	90	40	175
Total Employees	210	320	125	655
% 45 years +	21.43%	28.13%	32.00%	26.72%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 53,107
Toronto	\$ 52,053
York Region Brad WG	\$ 56,927
Ontario	\$ 52,857

Mapping and Related Technologists and Technicians

NOC 2255

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 655 mapping and related technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	220	33.33%	76,758	77,367	609	0.79%
913 Local, municipal and regional public administration	165	25.00%	35	56	21	60.00%
517 Telecommunications	40	6.06%	484	744	260	53.72%
912 Provincial and territorial public administration	40	6.06%	45	243	198	440.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Geomatics is an interdisciplinary field encompassing the collection, analysis and presentation of geographically referenced data
- Mobility is possible between some occupations in this unit group

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Drafting Technologists and Technicians (NOC 2253)
- Architects, Urban Planners and Land Surveyors (NOC 215)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

A W Hooker Associates Ltd
2896 South Sheridan Way
Oakville, Ontario L6J 7G9
Telephone: 1 905 829 9436
Fax: 1 905 829 9440
www.awhooker.com

Krcmar Surveyors Ltd.
1137 Centre Street
Thornhill, Ontario L4J 3M6
Telephone: 1 905 738 0053
Fax: 1 905 738 9221
www.krcmar.ca

Build Max Limited
1244A Bloor Street West
Toronto, Ontario M6H 1N5
Telephone: 1 416 588 6999
Fax: 1 416 588 1433
www.buildmaxltd.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Material Handlers

NOC 7452

This unit group includes workers who ensure that hazardous materials are handled and controlled in a safe manner and in compliance with regulatory requirements. They can be involved in a variety of activities, for example responding to emergencies, safely disposing of hazardous substances, reclaiming sites, or contributing to the development of legislation for hazardous materials. Materials handlers acquire their skills through formal education, specialized training, and work experience. Their expertise is essential to the protection of public health and the environment.¹

Places of Employment¹:

- Transportation, storage and moving companies
- Retail and wholesale warehouses
- Manufacturing and processing companies

Employment Requirements¹:

- Some secondary school education may be required
- Physical strength is required for manual material handlers who work with heavy materials

Local Educational Programs:

Program	Length	Certification	Institutions
Chemical Engineering Technology – Environmental	3 years	Advanced Diploma	Sheridan College
Materials Engineering	4 years	Bachelor of Applied Science Degree	University of Toronto
Mechanical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University, University of Toronto
Mechanical Engineering Technology	3 years	Advanced Diploma	Centennial College, George Brown College, Sheridan College
Mechanical Technician – CAD/CAM	2 years	Diploma	Centennial College

Local Union and Training Centre

Labourers Local 506

1600 Major MacKenzie Dr. East, Richmond Hill, Ontario L4S 1P4

Tel: 905-883-4268

The most important Essential Skills for this occupation are²:

- Numeracy
- Oral communication
- Use of memory

The most important High School subjects are³:

- Physical education
- Mechanics
- English
- Math

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	3,705	2,095	670	6,470
25 – 44 years	7,560	5,930	1,530	15,020
45 years and over	5,055	4,460	1,235	10,750
Total Employees	16,320	12,485	3,435	32,240
% 45 years +	30.97%	35.72%	35.95%	33.34%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 39,504
Toronto	\$ 34,481
York Region Brad WG	\$ 38,988
Ontario	\$ 40,264

Material Handlers

NOC 7452

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are a total of 32,235 material handlers employed.
The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
493 Warehousing and storage	3,070	9.52%	534	710	176	32.96%
561 Administrative and support services	2,780	8.62%	20,942	19,811	-1,131	-5.40%
484 Truck transportation	1,960	6.08%	7,272	15,310	8,038	110.53%
336 Transportation equipment manufacturing	1,485	4.61%	646	566	-80	-12.38%
414 Personal and household goods wholesaler-distributors	1,445	4.48%	5,324	5,233	-91	-1.71%
413 Food, beverage and tobacco wholesaler-distributors	1,310	4.06%	2,402	2,556	154	6.41%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations.

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Crane Operators, Drillers and Blasters (NOC 737)
- Other Transport Equipment Operators and Related Workers (NOC 743)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Guycan Plastics Limited

4 Alfred Kuehne Blvd., Unit # 2,3
Brampton, Ontario L6T 4N3
Telephone: 1 905 799 3636
Fax: 1 905 799 2374
www.guycanplastics.com

Casco Inc.

405 The West Mall, Suite 600
Etobicoke, Ontario M9C 0A1
Telephone: 1 416 620 2300
Fax: 1 416 620 4488
www.casco.ca

Canadian Pacific Railway

6830 Rutherford Road
Vaughan, Ontario L0L 1C0
Telephone: 1 905 893 5054
Fax: 1 905 893 5061
www.cpr.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Mechanical Engineering Technologists and Technicians

NOC 2232

Mechanical engineering technologists and technicians provide technical support and services or may work independently in mechanical engineering fields such as the design, development, maintenance and testing of machines, components, tools, heating and ventilating systems, power generation and power conversion plants, manufacturing plants and equipment.¹

Places of Employment¹:

- Consulting firms
- Engineering firms
- Manufacturing and processing companies
- Government

Employment Requirements¹:

- Completion of a two- or three-year college program in mechanical engineering technology is usually required for mechanical engineering technologists
- Completion of a one- or two-year college program in mechanical engineering technology is usually required for mechanical engineering technicians
- Certification in mechanical engineering technology or in a related field is available through provincial associations of engineering/applied science technologists and technicians and may be required for some positions
- A period of supervised work experience, usually two years, is required before certification

Local Educational Programs:

Program	Length	Certification	Institutions
Environmental Engineering	4 years	Bachelor of Engineering	University of Toronto
Mechanical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University, University of Toronto
Mechanical Engineering Technology	3 years	Advanced Diploma	Centennial College, George Brown College, Seneca College, Sheridan College

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Computer use
- Oral communication
- Thinking skills

The most important High School subjects are³:

- Math
- Physics
- Chemistry
- Drafting

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	80	60	80	220
25 – 44 years	480	285	105	870
45 years and over	345	270	125	740
Total Employees	905	615	310	1,830
% 45 years +	38.12%	43.90%	40.32%	40.44%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 60,157
Toronto	\$ 55,643
York Region Brad WG	\$ 65,335
Ontario	\$ 65,343

Mechanical Engineering Technologists and Technicians

NOC 2232

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 1,830 mechanical engineering technologists and technicians employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
333 Machinery manufacturing	370	20.22%	2,035	1,828	-207	-10.17%
541 Professional, scientific and technical services	345	18.85%	76,758	77,367	609	0.79%
336 Transportation equipment manufacturing	235	12.84%	646	566	-80	-12.38%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- There is mobility to other related occupations such as technical sales or drafting technologists and technicians
- Progression to supervisory occupations such as mechanical construction supervisor, manufacturing supervisor or operations maintenance manager is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Drafting technologists and technicians (2253)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

DBG

110 Ambassador Drive
Mississauga, Ontario L5T 2J2
Telephone: 1 905 670 1555
Fax: 1 905 362 2315
www.dbgcanada.com

PLITRON

8-601 Magnetic Drive,
Toronto, Ontario M3J 3J2
Telephone: 1 416 667 9914
Fax: 1 416 667 8928
www.plitron.com

Clover Tool Contractors

8271 Keele Street
Concord, Ontario L4K 1Z1
Telephone: 1 905 669 1999
Fax: 1 905 669 3565
www.clovertoolmfg.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Motor Vehicle Assemblers, Inspectors and Testers

NOC 9482

Motor vehicle assemblers assemble and install prefabricated motor vehicle parts and components to form subassemblies and finished motor vehicles. Motor vehicle inspectors and testers inspect and test parts, subassemblies, accessories and finished products to ensure proper performance and conformity to quality standards.¹

Places of Employment¹:

- Automobile manufacturers

Employment Requirements¹:

- Completion of secondary school is usually required
- Skills required for occupations in this unit group are normally acquired through on-the-job training

Local Union and Training Centre

Labourers Local 506

1600 Major MacKenzie Dr. East, Richmond Hill, Ontario L4S 1P4

Tel: 905-883-4268

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Thinking skills

The most important High School subjects are³:

- Mechanics
- English
- Math
- Science

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	950	290	415	1,655
25 – 44 years	4,290	3,235	2,125	9,650
45 years and over	2,805	2,855	1,800	7,460
Total Employees	8,045	6,380	4,340	18,765
% 45 years +	34.87%	44.75%	41.47%	39.75%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 53,463
Toronto	\$ 42,844
York Region Brad WG	\$ 44,594
Ontario	\$ 54,550

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 4,335 motor vehicle assemblers, inspectors and testers employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
336 Transportation equipment manufacturing	13,320	71.00%	646	566	-80	-12.38%
332 Fabricated metal product manufacturing	1,865	9.94%	3,024	2,586	-438	-14.48%
326 Plastics and rubber products manufacturing	950	5.06%	955	785	-170	-17.80%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Motor Vehicle Assemblers, Inspectors and Testers

NOC 9482

Additional Information¹:

- Mobility is possible to jobs in the same production department
- Progression to supervisory positions is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Supervisors, Assembly and Fabrication (NOC 922)
- Other Assembly and Related Occupations (NOC 949)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Ford Motor Co, Oakville Assembly Plant

The Canadian Road
Oakville, Ontario L6J 5C9
Telephone: 1 905 845 2511
Fax: 1 905 845 0159
www.ford.ca

TrakCon Drive Systems

31 Hiram Road
Richmond Hill, Ontario L4C 9E6
Telephone: 1 416 987 0279
Fax: 1 302 264 3421
www.trakcon.com

Magna International Inc.

337 Magna Dr.
Aurora, Ontario L4G 7K1
Telephone: 1 905 726 7156
Fax: 1 905 726 7494
www.magna.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Other Labourers in Processing, Manufacturing and Utilities

NOC 9619

This unit group includes labourers, not elsewhere classified, who perform material handling, clean-up, packaging and other elemental activities in processing, manufacturing and utilities¹

Places of Employment¹:

- Various manufacturing companies
- Printing and packaging companies

Employment Requirements¹:

- Some secondary school education may be required

Local Union and Training Centre

LIUNA Local 183 Training Centre

8700 Huntington Road, Woodbridge, Ontario

Tel: 416-242-7551 Fax: 416-242-7785 www.183training.com

Labourers Local 506

1600 Major MacKenzie Dr. East, Richmond Hill, Ontario L4S 1P4

Tel: 905-883-4268

The most important Essential Skills for this occupation are²:

- Reading text
- Document use
- Numeracy
- Thinking skills

The most important High School subjects are³:

- Industrial arts
- Math
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	1,015	1,125	220	2,360
25 – 44 years	3,840	4,985	1,160	9,985
45 years and over	3,015	4,395	1,135	8,545
Total Employees	7,870	10,505	2,515	20,890
% 45 years +	38.31%	41.84%	45.13%	40.90%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary	based on 2006 Census Data ⁴
Peel Halton	\$ 30,786
Toronto	\$ 29,168
York Region Brad WG	\$ 33,549
Ontario	\$ 33,882

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 20,890 other labourers in process, manufacturing and utilities employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
561 Administrative and support services	4,045	19.35%	20,942	19,811	-1,131	-5.40%
323 Printing and related support activities	2,480	11.87%	2,601	2,055	-546	-20.99%
337 Furniture and related product manufacturing	1,515	7.25%	1,479	1,287	-192	-12.98%
339 Miscellaneous manufacturing	1,200	5.74%	2,215	2,010	-205	-9.26%
325 Chemical manufacturing	1,110	5.31%	881	690	-191	-21.68%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Other Labourers in Processing, Manufacturing and Utilities

NOC 9619

Additional Information¹:

- There is some mobility among occupations in this unit group
- Progression to machine operating positions is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Machine Operators and Related Workers in Food, Beverage and Tobacco Processing (NOC 946)
- Machine Operators and Related Workers in Metal and Mineral Products Processing (NOC 941)
- Machine Operators and Related Workers in Chemical, Plastic and Rubber Processing (NOC 942)
- Machine Operators and Related Workers in Pulp and Paper Production and Wood Processing (NOC 943)
- Machine Operators and Related Workers in Textile Processing (NOC 944)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Kinequip Automation

333 Wyecroft Road, Unit 8
Oakville, Ontario L6K 2H2
Telephone: 1 905 465 0492
Fax: 1 905 465 0174
www.kinequip.com

Emporium Railings Inc.

213 Habitant Drive
North York, Ontario M9M 2P4
Telephone: 1 647 890 2724
www.emporiumrailings.com

Integrated Graphics Corporation

35 Romina Drive
Concord, Ontario L4K 4Z9
Telephone: 1 905 760 8860
Fax: 1 905 760 9490
www.igprinter.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Plastics Processing Machine Operators

NOC 9422

Plastics processing machine operators set up and operate plastic mixing, calendaring, extruding and moulding processing machines used in the manufacture of plastic parts and plastic products.¹

Places of Employment¹:

- Plastic products manufacturing companies

Employment Requirements¹:

- For all operators in this unit group, completion of secondary school may be required
- On-the-job training is provided
- Several years of experience as a helper, tender or packer in the same company may be required
- Completion of a statistical process control (SPC) course may be required
- Completion of courses in hydraulics, pneumatics and electronics systems may be required for moulding process operators

Local Union and Training Centre

Labourers Local 506

1600 Major MacKenzie Dr. East, Richmond Hill, Ontario L4S 1P4

Tel: 905-883-4268

The most important Essential Skills for this occupation are²:

- Reading text
- Document use
- Numeracy
- Thinking skills

The most important High School subjects are³:

- Machine shop
- Sciences
- Math
- Computer basics
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	240	205	55	500
25 – 44 years	2,035	2,200	500	4,735
45 years and over	1,530	1,735	555	3,820
Total Employees	3,805	4,140	1,110	9,055
% 45 years +	40.21%	41.91%	50.00%	42.19%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 36,957
Toronto	\$ 32,429
York Region Brad WG	\$ 42,982
Ontario	\$ 39,171

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 9,055 plastics processing machine operators employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
326 Plastics and rubber products manufacturing	7,770	86.00%	955	785	-170	-17.80%
333 Machinery manufacturing	225	2.49%	2,035	1,828	-207	-10.17%
336 Transportation equipment manufacturing	195	2.16%	646	566	-80	-12.38%

Source: Statistics Canada, 2006 Census; Statistics Canada, Canadian Business Patterns Data, December 2003, June 2009.

Plastics Processing Machine Operators

NOC 9422

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Machine Operators and Related Workers in Metal and Mineral Products Processing (NOC 941)
- Machine Operators and Related Workers in Pulp and Paper Production and Wood Processing (NOC 943)
- Labourers in Processing, Manufacturing and Utilities (NOC 961)
- Central Control and Process Operators in Manufacturing and Processing (NOC 923)
- Supervisors, Processing Occupations (NOC 921)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Engineered Plastics Inc.

1400 Cornwall Road, Unit 6
Oakville, Ontario L6J 7W5
Telephone: 1 905 847 3040
Fax: 1 905 847 0870
www.engplastics.com

3D Mould & Manufacturing Ltd.

1365 Morningside Ave., Unit 8
Scarborough, Ontario M1B 4Y5
Telephone: 1 416 412 7836
Fax: 1 416 412 3172
www.3dmouldmfgltd.com

Vicro Research Inc.

130 Buttermill Ave.
Concord, Ontario L4K 3X6
Telephone: 1 905 738 1251
Fax: 1 905 738 3737
www.vicroresearch.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Plumber

NOC 7251

Plumbers install, repair and maintain pipes, fixtures and other plumbing equipment used for water distribution and waste water disposal in residential, commercial and industrial buildings.¹

Places of Employment¹:

- Maintenance departments of factories, plants and other establishments
- Plumbing contractors
- Self employed

Employment Requirements¹:

- Completion of secondary school is usually required
- Completion of a four- to five-year apprenticeship program or a combination of over five years of work experience in the trade and some high school, college or industry courses in plumbing is usually required to be eligible for trade certification
- Trade certification is compulsory in Nova Scotia, Prince Edward Island, New Brunswick, Quebec, Ontario, Saskatchewan, Alberta and British Columbia and available, but voluntary, in Newfoundland and Labrador, Manitoba, Nunavut, the Northwest Territories and the Yukon
- Interprovincial trade certification (Red Seal) is available to qualified plumbers

Local Educational Programs:

Program	Length	Certification	Institutions
Construction Millwright	N/A	Apprenticeship	Sheridan College
Construction Trades and Techniques	N/A	Certificate	George Brown College
Plumber	N/A	Apprenticeship	George Brown College, Humber College
Welding Techniques	N/A	Certificate	Sheridan College

Local Union and Training Centre

Plumbers & Steamfitters Local 46

936 Warden Ave., Scarborough, Ontario M1L 4C9

Tel: 416-759-9351 Fax: 416-759-7346

Refrigeration Workers Local 787

419 Deerhurst Drive, Brampton, Ontario L6T 5K3

Tel: 905-790-1019 Fax: 905-790-1022 Toll Free: 1-800-387-9121

The most important Essential Skills for this occupation are²:

- Document use
- Numeracy

The most important High School subjects are³:

- Math
- Sciences
- Industrial arts

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	280	310	275	865
25 – 44 years	890	1,315	810	3,015
45 years and over	570	855	525	1,950
Total Employees	1,740	2,480	1,610	5,830
% 45 years +	32.76%	34.48%	32.61%	33.45%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ¹	
Peel Halton	\$ 55,440
Toronto	\$ 47,186
York Region Brad WG	\$ 53,007
Ontario	\$ 49,021

Plumber

NOC 7251

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 5,830 plumbers employed.
The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
238 Specialty trade contractors	4,495	77.17%	23,111	24,416	1,305	5.65%
236 Construction of buildings	550	9.44%	13,667	13,829	162	1.19%
611 Educational services	150	2.58%	3,956	4,854	898	22.70%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Steamfitters, pipefitters and sprinkler system installers (7252)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Adelt Mechanical Works

2640 Argentia Rd.
Mississauga, Ontario L5N 6C5
Telephone: 1 905 812 7900
Fax: 1 905 812 7907
www.adeltmechanical.com

The RenoBuild Group Inc.

97 Lawson Road
Toronto, Ontario M1C 2J1
Telephone: 1 416 281 5333
Fax: 1 416 281 9595
www.renobuild.ca

New Water Plumbing Inc.

34 Doncaster Avenue, Unit 10
Thornhill, Ontario L3T 4S1
Telephone: 1 905 731 2066
Fax: 1 905 731 0293
www.newwaterplumbing.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Refrigeration and Air Conditioning Mechanics

NOC 7313

Refrigeration and air conditioning mechanics install, maintain, repair and overhaul residential central air conditioning systems, commercial and industrial refrigeration and air conditioning systems and combined heating, ventilation and cooling systems. They also adjust such systems to meet energy efficiency standards and regulations. Transport refrigeration mechanics are included in this unit group.¹

Places of Employment¹:

- Refrigeration and air conditioning installation contractors
- Manufacturing and industrial companies
- Engineering firms
- Self employed

Employment Requirements¹:

- Completion of secondary school is usually required
- Completion of a three- to five-year apprenticeship program or a combination of over five years of work experience in the trade and some high school, college or industry courses in refrigeration and air conditioning repair is usually required to be eligible for trade certification
- Trade certification for refrigeration and air conditioning mechanics is compulsory in Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia and available, but voluntary, in all other provinces and the territories
- Interprovincial trade certification (Red Seal) is also available to qualified refrigeration and air conditioning mechanics

Local Educational Programs:

Program	Length	Certification	Institutions
Electric Apprenticeship	N/A	Apprenticeship	Centennial College
Electronics Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, Seneca College, Sheridan College
Heating, Refrigeration and Air Conditioning Technician/Technology Program	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	George Brown College, Humber College
Refrigeration and Air Conditioning	N/A	Certificate	Humber College
Refrigeration & Air Conditioning Apprenticeship	N/A	Apprenticeship	Centennial College, George Brown College
Residential Air Conditioning Systems Mechanic	N/A	Apprenticeship	George Brown College

Local Union and Training Centre

Plumbers & Steamfitters Local 46

936 Warden Ave., Scarborough, Ontario M1L 4C9

Tel: 416-759-9351 Fax: 416-759-7346

Refrigeration Workers Local 787

419 Deerhurst Drive, Brampton, Ontario L6T 5K3

Tel: 905-790-1019 Fax: 905-790-1022 Toll Free: 1-800-387-9121

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	330	155	105	590
25 – 44 years	965	790	570	2,325
45 years and over	600	555	400	1,555
Total Employees	1,895	1,500	1,075	4,470
% 45 years +	31.66%	37.00%	37.21%	34.79%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 54,929
Toronto	\$ 48,780
York Region Brad WG	\$ 52,457
Ontario	\$ 52,226

Refrigeration and Air Conditioning Mechanics

NOC 7313

The most important Essential Skills for this occupation are²:

- Reading text
- Numeracy
- Document use

The most important High School subjects are³:

- Machine shop
- Math
- Sciences
- Computer basis
- English

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 4,470 refrigeration and air conditioning mechanics employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
238 Specialty trade contractors	3,265	72.88%	23,111	24,416	1,305	5.65%
333 Machinery manufacturing	195	4.35%	2,035	1,828	-207	-10.17%
221 Utilities	145	3.24%	180	281	101	56.11%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Construction Millwrights and Industrial Mechanics (Except Textile) (NOC 7311)
- Heavy-Duty Equipment Mechanics (NOC 7312)
- Aircraft Mechanics and Aircraft Inspectors (NOC 7315)
- Other Mechanics (NOC 733)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Adelt Mechanical Works

2640 Argentia Rd, Mississauga, Ontario L5N 6C5
 Telephone: 1 905 812 7900
 Fax: 1 905 812 7907
www.adeltmechanical.com

Abudget Heating & Air Conditioning

41 Colville Road, Toronto, Ontario M6M 2Y2
 Telephone: 1 416 703 1990
www.abudgetair.com

Sunwell Technologies Inc.

180 Caster Avenue, Woodbridge, Ontario L4L 5Y7
 Telephone: 1 905 856 0400
 Fax: 1 905 856 1935
www.sunwell.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
 Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Residential Home Builders and Renovators

NOC 0712

Residential home builders own, operate and manage companies engaged in the construction of new residential homes. Residential home renovators own, operate and manage companies engaged in the renovation of existing residential homes.¹

Places of Employment¹:

- Construction companies
- Self-employed

Employment Requirements¹:

- Extensive experience in the home construction industry, including experience as a general supervisor, is usually required for self-employment as a home builder or a home renovator

Local Educational Programs:

Program	Length	Certification	Institutions
Architectural Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, George Brown College, Humber College, Sheridan College
Building Renovation Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	George Brown College
Building Systems Engineering Technician	2 years	Diploma	Seneca College
Construction Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	George Brown College
Construction and Environment - Regulations & Compliance	4 years	Degree	George Brown College
Construction Science and Management	4 years	Bachelor's Degree	George Brown College
Roof Consultant	N/A	Certificate	Humber College
Sustainable Energy & Building Technology	3 years	Diploma	Humber College

Local Union and Training Centre

Carpenters' Local Union 27 Joint Apprenticeship & Training Trust Fund Inc.
222 Rowntree Dairy Road, Woodbridge, Ontario L4L 9T2
Tel: 905 652-5506 www.carpenterstraining.ca

LIUNA Local 183 Training Centre
8700 Huntington Road, Woodbridge, Ontario
Tel: 416-242-7551 Fax: 416-242-7785 www.183training.com

The most important Essential Skills for this occupation are²:

- Document use
- Oral communication
- Numeracy

The most important High School subjects are³:

- Business
- Geography
- Math
- English
- Computer-related courses

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	120	185	30	335
25 – 44 years	975	1,500	720	3,195
45 years and over	875	1,395	830	3,100
Total Employees	1,970	3,080	1,580	6,630
% 45 years +	44.42%	45.29%	52.53%	46.76%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 42,492
Toronto	\$ 84,414
York Region Brad WG	\$ 48,747
Ontario	\$ 51,834

Residential Home Builders and Renovators

NOC 0712

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are a total of 6,630 residential home builders and renovators employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
236 Construction of buildings	5,445	82.19%	13,667	13,829	162	1.19%
238 Specialty trade contractors	765	11.55%	23,111	24,416	1,305	5.65%

Source: Statistics Canada, 2006 Census; Statistics Canada, Canadian Business Patterns Data, December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Construction Managers (NOC 0711)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Bittar Construction Services

2775 Kingsway Dr.
Oakville, ON L6J 6Z5
Telephone: 1 905 829 5204
www.bittarconstruction.com

North Star Construction

87 Sheppard Avenue East
North York, Ontario M2N 3A3
Telephone: 647.347.6784
Fax: 647.347.0642
www.nostco.com

Arrow Contracting

10-8707 Dufferin Street, Suite #315
Vaughan, Ontario L4J 0A6
Telephone: 1 647 724 7559
Fax: 1 416 987 7177
www.arrowcontracting.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data, December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Retail Salespersons and Sales Clerks

NOC 6421

Retail salespersons and sales clerks sell, rent or lease a range of technical and non-technical goods and services directly to consumers. They may be specialized in a particular good or service.¹

Places of Employment¹:

- Retail stores and businesses
- Wholesale businesses

Employment Requirements¹:

- Completion of secondary school may be required
- A university degree or college diploma may be required by some employers
- Specific subject matter courses or training may be required
- Demonstrated sales ability and product knowledge are usually required for retail salespersons who sell complex or valuable merchandise

Local Educational Programs:

Program	Length	Certification	Institutions
Certificate in Sustainability		Certificate in Sustainability (CKSS)	Ryerson University
Environmental Education	N/A	Certificate	Humber College
Environmental Studies Preparation Certificate	N/A	Certificate	Centennial College
Green Business Management	1 year	Graduate Certificate	Seneca College
Thinking Environmentally	N/A	Certificate	Humber College

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Oral communication
- Problem solving

The most important High School subjects are³:

- Business English
- Math
- Computer basics

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	14,695	17,565	9,220	41,480
25 – 44 years	12,560	19,280	7,400	39,240
45 years and over	11,805	13,980	7,680	33,465
Total Employees	39,060	50,825	24,300	114,185
% 45 years +	30.22%	27.51%	31.60%	29.31%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 44,611
Toronto	\$ 37,391
York Region Brad WG	\$ 44,930
Ontario	\$ 38,365

Retail Salespersons and Sales Clerks

NOC 6421

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 114,185 retail salespersons and sales clerks employed.

The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
448 Clothing and clothing accessories stores	23,150	20.27%	5,464	5,287	-177	-3.24%
452 General merchandise stores	12,840	11.24%	1,923	1,787	-136	-7.07%
445 Food and beverage stores	9,260	8.11%	5,772	5,903	131	2.27%
453 Miscellaneous store retailers	7,500	6.57%	4,507	3,472	-1,035	-22.96%
451 Sporting goods, hobby, book and music stores	6,240	5.46%	2,068	1,792	-276	-13.35%
443 Electronics and appliance stores	5,820	5.10%	2,800	2,478	-322	-11.50%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Customer Service, Information and Related Clerks (NOC 1453)
- Sales Representatives - Wholesale Trade (Non-Technical) (NOC 6411)
- Cashiers (NOC 6611)
- Sales and Service Supervisors (NOC 621)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Sheridan Nurseries

RR#4 12302 Tenth Line
Georgetown, Ontario L7G 4S7
Telephone: 1 416 798 7970
Fax: 1 905 873 2478
www.sheridannurseries.com

Mountain Equipment Co-op

400 King St. West
Toronto, Ontario M5V 1K2
Telephone: 1 416 340 2667
www.mec.ca

Direct Energy Residential - Canada East

25 Sheppard Avenue West, Suite 1500
Toronto, Ontario M2N 6S6
Telephone: 1 416 221 4441
www.directenergy.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Rubber Processing Machine Operators and Related Workers

NOC 9423

Workers in this unit group operate rubber processing machinery and assemble and inspect rubber products.¹

Places of Employment¹:

- Tire manufacturers
- Other rubber products manufacturing

Employment Requirements¹:

- Completion of secondary school may be required
- Experience as a labourer in the same company may be required
- On-the-job training is provided

Local Union and Training Centre

Labourers Local 506

1600 Major MacKenzie Dr. East, Richmond Hill, Ontario L4S 1P4

Tel: 905-883-4268

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Numeracy
- Thinking skills

The most important High School subjects are³:

- Machine shop
- Sciences
- Math
- Computer basics
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	10	30	0	40
25 – 44 years	135	250	10	395
45 years and over	155	180	40	375
Total Employees	300	460	50	810
% 45 years +	51.67%	39.13%	80.00%	46.30%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 41,024
Toronto	\$ 33,815
York Region Brad WG	\$ 46,575
Ontario	\$ 43,974

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 810 rubber processing machine operators employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
326 Plastics and rubber products manufacturing	555	68.52%	955	785	-170	-17.80%
339 Miscellaneous manufacturing	60	7.41%	2,215	2,010	-205	-9.26%
336 Transportation equipment manufacturing	55	6.79%	646	566	-80	-12.38%
325 Chemical manufacturing	50	6.17%	881	690	-191	-21.68%

Source: Statistics Canada, 2006 Census; Statistics Canada, Canadian Business Patterns Data, December 2003, June 2009.

Rubber Processing Machine Operators and Related Workers

NOC 9423

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Machine Operators and Related Workers in Metal and Mineral Products Processing (NOC 941)
- Machine Operators and Related Workers in Pulp and Paper Production and Wood Processing (NOC 943)
- Labourers in Processing, Manufacturing and Utilities (NOC 961)
- Central Control and Process Operators in Manufacturing and Processing (NOC 923)
- Supervisors, Processing Occupations (NOC 921)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Habasit Canada Ltd.

2275 Bristol Circle
Oakville, Ontario L6H 6P8
Telephone: 1 905 827 4131
Fax: 1 905 825 2612
www.habasit.ca

Hansa-Flex Hydraulics Canada Inc.

295 Connie Crescent
Concord, Ontario L4K 5R2
Telephone: 1 416 760 2224
Fax: 1 416 760 0150
www.hansa-flex.ca

Trimbo Window Manufacturing Inc.

301 Trowers Road
Woodbridge, Ontario L4L 5Z9
Telephone: 1 905 851 3466
Fax: 1 905 850 3545
www.trimbowindow.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Shippers and Receivers

NOC 1471

Shippers and receivers ship, receive and record the movement of parts, supplies, materials, equipment and stock to and from an establishment.¹

Places of Employment¹:

- Public sector
- Retail and wholesale companies
- Manufacturing companies
- Other commercial and industrial establishment

Employment Requirements¹:

- Completion of secondary school is usually required
- Experience in a related clerical occupation or as a warehouse worker may be required
- Forklift certificate may be required
- Driver's licence may be required

Local Educational Programs:

Program	Length	Certification	Institutions
Business	3 years	Advanced Diploma	Centennial College, George Brown College, Humber College, Seneca College, Sheridan College

The most important Essential Skills for this occupation are²:

- Reading text
- Numeracy
- Thinking skills

The most important High School subjects are³:

- Business
- Computer basics
- Math
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	1,805	1,420	555	3,780
25 – 44 years	5,440	5,785	1,460	12,685
45 years and over	3,585	3,835	1,280	8,700
Total Employees	10,830	11,040	3,295	25,165
% 45 years +	33.10%	34.74%	38.85%	34.57%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 37,968
Toronto	\$ 34,202
York Region Brad WG	\$ 37,725
Ontario	\$ 36,983

Shippers and Receivers

NOC 1471

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 25,165 shippers and receivers employed.
The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
414 Personal and household goods wholesaler-distributors	1,875	7.45%	5,324	5,233	-91	-1.71%
417 Machinery, equipment and supplies wholesaler-distributors	1,560	6.20%	6,146	5,567	-579	-9.42%
493 Warehousing and storage	1,160	4.61%	534	710	176	32.96%
452 General merchandise stores	1,145	4.55%	1,923	1,787	-136	-7.07%
416 Building material and supplies wholesaler-distributors	1,105	4.39%	2,945	2,892	-53	-1.80%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to supervisory positions is possible with additional training or experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Mail and Message Distribution Occupations (NOC 146)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Ronco Freight International Inc.
208 Wycroft Road, Suite 202
Oakville, Ontario L6K 3T8
Telephone: 1 905 847 5524
Fax: 1 905 847 3903
www.ronfreight.com

The Parts Man Inc.
4544 Dufferin St.
Toronto, Ontario M3H 5X2
Telephone: 1 416 388 8918
www.partsmaninc.com

Magnotta Winery Corporation
271 Chrislea Road
Woodbridge, Ontario L4L 8N6
Telephone: 1 905 738 9463
Fax: 1 905 738 5551
www.magnotta.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Stationary Engineers and Auxiliary Equipment Operators

NOC 7351

Stationary engineers and auxiliary equipment operators operate and maintain various types of stationary engines and auxiliary equipment to provide heat, light, power and other utility services for commercial, industrial and institutional buildings and other work sites.¹

Places of Employment¹:

- Industrial and manufacturing plants
- Hospitals
- Universities
- Government
- Utility companies
- Hotels
- Other commercial establishments

Employment Requirements¹:

- Completion of secondary school is usually required
- Completion of a regulated apprenticeship program in stationary or power engineering or on-the-job training and additional courses or a college training program in stationary or power engineering or building systems operations are required
- Provincial or territorial certification or licensing according to class (4th, 3rd, 2nd and 1st class and an additional 5th class in Manitoba, Saskatchewan, Nunavut and the Northwest Territories) is required

Local Educational Programs:

Program	Length	Certification	Institutions
Environmental Engineering	4 years	Bachelor of Engineering	University of Toronto
Industrial Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University
Mechanical Engineering Technology	3 years	Diploma	Centennial College, George Brown College, Seneca College Sheridan College

The most important Essential Skills for this occupation are²:

- Reading text
- Document use

The most important High School subjects are³:

- Industrial arts
- Math
- Physics
- Computer basics
- English

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	0	0	0	0
25 – 44 years	70	75	30	175
45 years and over	230	285	105	620
Total Employees	300	360	135	795
% 45 years +	76.67%	79.17%	77.78%	77.99%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 76,182
Toronto	\$ 66,112
York Region Brad WG	\$ 67,869
Ontario	\$ 74,307

Stationary Engineers and Auxiliary Equipment Operators

NOC 7351

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 795 stationary engineers and auxiliary equipment operators employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
611 Educational services	140	17.72%	3,956	4,854	898	22.70%
622 Hospitals	90	11.39%	100	82	-18	-18.00%
221 Utilities	80	10.13%	180	281	101	56.11%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression from lower to higher classes for stationary or power engineers is dependent on further training and experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Mechanical Engineers (NOC 2132)
- Central Control and Process Operators in Manufacturing and Processing (NOC 923)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Power Save Solutions Inc.
200 North Service Road West, Unit 1, Suite 525
Oakville, Ontario L6M 2Y1
Telephone: 1 905 465 2275
Fax: 1 905 465 2295
www.powersavesolutions.com

The Rotman Research Institute - Baycrest
3560 Bathurst Street
Toronto, Ontario M6A 2E1
Telephone: 1 416 785 2500 ext. 3550
Fax: 1 416 785 2862
www.rotman-baycrest.on.ca

LGI Consulting Engineers Inc.
588 Edward Avenue, Unit 49
Richmond Hill, Ontario L4C 9Y6
Telephone: 1 905 884 0911
Fax: 1 905 884 0790
www.lgiengineers.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Supervisors, Petroleum, Gas and Chemical Processing and Utilities

NOC 9212

Supervisors in this unit group supervise and co-ordinate the activities of workers in Petroleum, Gas and Chemical Process Operators (9232), Chemical Plant Machine Operators (9421), Labourers in Chemical Products Processing and Utilities (9613), Water and Waste Plant Operators (9424), Stationary Engineers and Auxiliary Equipment Operators (7351) and Power Systems and Power Station Operators (7352).¹

Places of Employment¹:

- Petroleum and natural gas process companies
- Pipeline and petrochemical companies
- Chemical and pharmaceutical companies
- Water and waste treatment utilities
- Other industries and institutions

Employment Requirements¹:

- Completion of secondary school is required
- Post-secondary education in chemical processing or sciences may be required for some occupations in this unit group
- Several years of experience as a senior operator in the same company or plant are usually required
- Some occupations in this unit group may require a specific licence or certification, such as a stationary engineer's licence or refrigeration certification

Local Educational Programs:

Program	Length	Certification	Institutions
Chemical Engineering	4 years, 5 year Co-op	Bachelor of Engineering	Ryerson University, University of Toronto
Chemical Engineering Technology	3 years	Advanced Diploma	Seneca College, Sheridan College
Environmental Chemistry	4 years	Bachelor of Science	University of Toronto
Environmental Engineering Science Certificate		Certificate in Environmental Engineering Science	Ryerson University

Local Union and Training Centre

Power Workers' Union
244 Eglinton Ave. East, Toronto, Ontario M4P 1K2
Fax: 416 481-7115 www.pwu.ca

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Oral communication
- Numeracy

The most important High School subjects are³:

- English
- Computer related courses
- Math
- Industrial arts

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	20	10	10	40
25 – 44 years	150	185	115	450
45 years and over	290	180	160	630
Total Employees	460	375	285	1,120
% 45 years +	63.04%	48.00%	56.14%	56.25%

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 66,734
Toronto	\$ 62,678
York Region Brad WG	\$ 76,707
Ontario	\$ 81,139

Source: Statistics Canada, 2006 Census

Supervisors, Petroleum, Gas and Chemical Processing and Utilities

NOC 9212

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 1,120 supervisors of petroleum, gas and chemical processing utilities employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
325 Chemical manufacturing	440	39.29%	881	690	-191	-21.68%
221 Utilities	365	32.59%	180	281	101	56.11%
324 Petroleum and coal products manufacturing	65	5.80%	70	55	-15	-21.43%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- There is some mobility between occupations with similar technological or licensing requirements within this group

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Managers in Manufacturing and Utilities (NOC 091)
- Supervisors, Assembly and Fabrication (NOC 922)
- Central Control and Process Operators in Manufacturing and Processing (NOC 923)
- Chemical Technologists and Technicians (NOC 2211)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

L.M Generating Power Co. Ltd.

1900 Shawson Drive
Mississauga, Ontario L4W 1R7
Telephone: 1 905 564 7322
Fax: 1 905 564 6917
www.lmgpower.com

Build Max Limited

1244A Bloor Street West
Toronto, Ontario M6H 1N5
Telephone: 1 416 588 6999
Fax: 1 416 588 1433
www.buildmaxltd.ca

Energyshop.com

120 Newkirk Road, Unit 25, Suite 41
Richmond Hill, Ontario L4C 9S7
Telephone: 1 905 737 5041
Fax: 1 905 770 8432
www.energyshop.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Technical Sales Specialists – Wholesale Trade

NOC 6221

Technical sales specialists, wholesale trade, sell a range of technical goods and services, such as scientific and industrial products, electricity, telecommunications services and computer services, to governments and to commercial and industrial establishments in domestic and international localities. Technical sales specialists who are supervisors are included in this unit group.¹

Places of Employment¹:

- Pharmaceutical companies
- Industrial equipment manufacturers
- Computer service firms
- Engineering firms
- Hydroelectric companies
- Self employed

Employment Requirements¹:

- A university degree or college diploma in a program related to the product or service is usually required
- Experience in sales or in a technical occupation related to the product or service may be required
- Fluency in a specific foreign language, and/or foreign work or travel experience may be required for technical sales specialists seeking employment with companies that import or export technical goods or services
- Technical sales supervisors require experience as a technical sales specialist

Local Educational Programs:

Program	Length	Certification	Institutions
Business	3 years	Advanced Diploma	Centennial College, George Brown College, Humber College, Seneca College, Sheridan College
Business Administration	4 years	Bachelor of Business	Ryerson University, University of Toronto, York University
Certificate in Sustainability		Certificate in Sustainability (CKSS)	Ryerson University
Environmental Studies: An Interdisciplinary Approach	N/A	Certificate	Humber College
Environmental Studies Preparation Certificate	N/A	Certificate	Centennial College
Green Business Management	1 year	Graduate Certificate	Seneca College
Innis Environmental Studies Programs	4 years	Bachelor of Arts Degree/ Bachelor of Science	University of Toronto
Thinking Environmentally	N/A	Certificate	Humber College

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Oral communication
- Document use
- Thinking skills

The most important High School subjects are³:

- Marketing
- Business
- Computer related courses
- English
- Math

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	225	275	170	670
25 – 44 years	2,835	2,570	1,540	6,945
45 years and over	1,920	1,240	1,040	4,200
Total Employees	4,980	4,085	2,750	11,815
% 45 years +	38.55%	30.35%	37.82%	35.55%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 83,341
Toronto	\$ 80,664
York Region Brad WG	\$ 98,153
Ontario	\$ 80,227

Technical Sales Specialists – Wholesale Trade

NOC 6221

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 11,815 technical sales specialists employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
541 Professional, scientific and technical services	745	39.84%	76,758	77,367	609	0.79%
325 Chemical manufacturing	240	12.83%	881	690	-191	-21.68%
326 Plastics and rubber products manufacturing	125	6.68%	955	785	-170	-17.80%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Extensive company training programs for technical sales specialists may be provided by employers
- Progression to sales management positions is possible with additional training or experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Sales Representatives - Wholesale Trade (Non-Technical) (NOC 6411)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

M&P Solutions
7336 Shalford Road
Mississauga Ontario L4T 2P7
Telephone: 1 416 471 9698
www.mandpsolutions.ca

Export Development Canada
150 York St., Suite 810
Toronto, Ontario M5H 3S5
Telephone: 1 416 640 7613
Fax: 1 416 862 1267
www.edc.ca

Honson Pharmatech Group Ltd.
275 Don Park Road, Unit 8
Markham, Ontario L3R 1C2
Telephone: 1 905 752 1822
Fax: 1 905 752 1820
www.honsons.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Urban and Land Use Planners

NOC 2153

Urban and land use planners develop plans and recommend policies for managing land use, physical facilities and associated services for urban and rural areas and remote regions. They help local officials alleviate social, economic, and environmental problems by recommending locations for roads, schools, and other infrastructure and suggesting zoning regulations for private property - work that requires forecasting the future needs of the population.¹

Places of Employment¹:

- Government
- Architectural, engineering, and landscape consulting/contracting firms
- Business corporations
- Business surveying firms
- Land developers
- Self employed

Employment Requirements¹:

- A bachelor's degree in urban and regional planning, geography, architecture, engineering or a related discipline is required
- A master's degree in one of these disciplines may be required
- Membership in the Canadian Institute of Planners is usually required
- Membership in a provincial planning institute may be required in some provinces

Local Educational Programs:

Program	Length	Certification	Institutions
Architectural Science	4 years	Bachelor of Architectural Science	Ryerson University
Architectural Technician/Technology	2 years (technician) 3 years (technology)	Diploma Advanced Diploma	Centennial College, George Brown College, Humber College, Sheridan College
Environmental Geography	4 years	Bachelor of Arts	University of Toronto
Geographic Analysis	4 years	Bachelor of Arts in Geographic Analysis	Ryerson University
Urban and Regional Planning	4 years	Bachelor of Urban and Regional Planning	Ryerson University

The most important Essential Skills for this occupation are²:

- Writing
- Oral communication
- Critical thinking

The most important High School subjects are³:

- Math
- Computer-related courses
- Drafting
- English
- Blueprint reading

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	20	45	25	90
25 – 44 years	275	640	140	1,055
45 years and over	165	325	115	605
Total Employees	460	1,010	280	1,750
% 45 years +	35.87%	32.18%	41.07%	34.57%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 69,831
Toronto	\$ 70,788
York Region Brad WG	\$ 82,751
Ontario	\$ 69,216

Urban and Land Use Planners

NOC 2153

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 1,745 urban and land use planners employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
913 Local, municipal and regional public administration	820	46.99%	35	56	21	60.00%
541 Professional, scientific and technical services	545	31.23%	76,758	77,367	609	0.79%
912 Provincial and territorial public administration	120	6.88%	45	243	198	440.00%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to management positions in planning is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

- Professional occupations in business services to management (1122)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Thurber Engineering Ltd.
Suite 103, 2010 Winston Park Drive
Oakville, Ontario L6H 5R7
Telephone: 1 905 829 8666
Fax: 1 905 829 1166
www.thurber.ca

Bousfields Inc.
3 Church Street, Suite 200
Toronto, Ontario M5E 1M2
Telephone: 1 416 947 9744
Fax: 1 416 947 0781
www.bousfields.ca

JSW and Associates
20 Mural Street, Unit 10
Richmond Hill, Ontario L4B 1K3
Telephone: 1 905 889 8100
Fax: 1 905 889 6616
www.jsw.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Utilities Managers

NOC 0912

This unit group includes managers who plan, organize, direct, control and evaluate the operations of utility companies or services or of heating oil distribution companies. The services provided include the distribution of water, electricity, natural gas and heating oil to residential, commercial and industrial consumers, waste disposal and waste recycling.¹

Places of Employment¹:

- Public utilities companies
- Private utilities companies
- Heating oil distribution companies

Employment Requirements¹:

- A bachelor's degree or college diploma in an appropriate discipline is required. For example, electrical engineering is required for managers of transmission lines, and water resource technology for water supply managers
- Several years of experience as a supervisor in a related utilities operations department are required
- Professional engineer certification is usually required for managers of utility operations involved in the transmission and distribution of electrical power, and natural gas and heating oil

Local Educational Programs:

Program	Length	Certification	Institutions
Electrical Engineering	4 years, 5 year Industrial Internship Program	Bachelor of Engineering	Ryerson University
Electronics Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma/ Advanced Diploma(3 years)	Centennial College, Seneca College, Sheridan College
Electromechanical Engineering Technician/Technology	2 years regular 3 years Co-op	Diploma Advanced Diploma	George Brown College, Sheridan College
Energy Systems Engineering Technician/Technology	2 years (technician) 3 years (technology)	Diploma/ Advanced Diploma(3 years)	Centennial College
Environment and Energy	4 years	Bachelor of Science	University of Toronto
Environmental Engineering	4 years	Bachelor of Engineering	University of Toronto
Environmental Engineering Science Certificate	N/A	Certificate in Environmental Engineering Science	Ryerson University
Environmental Systems Engineering Technology - Energy Management Program	3 years	Diploma	Humber College
Sustainable Energy	4 years	Bachelor of Engineering	University of Toronto

Local Union and Training Centre

Power Workers' Union
244 Eglinton Ave. East, Toronto, Ontario M4P 1K2
Fax: 416 481-7115 www.pwu.ca

The most important Essential Skills for this occupation are²:

- Reading text
- Writing
- Document use
- Oral communication
- Numeracy
- Thinking skills

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	15	10	10	35
25 – 44 years	255	245	160	660
45 years and over	295	245	150	690
Total Employees	565	500	315	1,380
% 45 years +	52.21%	49.00%	47.62%	50.00%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 102,469
Toronto	\$ 109,327
York Region Brad WG	\$ 205,124
Ontario	\$ 107,422

Utilities Managers

NOC 0912

The most important High School subjects are³:

- Industrial Arts
- English
- Business

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 1,380 utility managers employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
221 Utilities	745	54.38%	180	281	101	56.11%
562 Waste management & remediation services	240	17.52%	377	496	119	31.56%
418 Miscellaneous wholesaler-distributors	85	6.20%	5,838	4,805	-1,033	-17.69%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Additional Information¹:

- Progression to senior management positions in the utility industry is possible with experience

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Supervisors, Processing Occupations (NOC 921)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Oakville Hydro Corporation
861 Redwood Square
Oakville, Ontario L6J 5E3
Telephone: 1 905 825 9400
Fax: 1 905 825 4447
www.oakvillehydro.com

SunLit Technologies Inc.
2721 Markham Road, Unit 43
Scarborough, Ontario M1X 1L5
Telephone: 1 416 997 6527
Fax: 1 416 640 6405
www.sunlit.ca

PowerStream Inc.
161 Cityview Blvd.
Woodbridge, Ontario L4H 0A9
Telephone: 1 905 417 6900
Fax: 1 905 532 4404
www.powerstream.ca

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.

Water and Waste Plant Operator

NOC 9424

Water plant operators monitor and operate computerized control systems and related equipment in water filtration and treatment plants to regulate the treatment and distribution of water. Waste plant operators monitor and operate computerized control systems and related equipment in wastewater, sewage treatment and liquid waste plants to regulate the treatment and disposal of sewage and wastes.¹

Places of Employment¹:

- Municipal governments
- Other industries and institutions
- Various manufacturing companies

Employment Requirements¹:

- Completion of secondary school is usually required
- College, high school or industry training courses in water treatment pollution control are required
- Certification in water distribution or treatment (Levels I, II or III) is required
- Certification in workplace hazardous materials information system (WHMIS), transportation of dangerous goods (TDG), and courses in safety practices may be required
- On-the-job training is provided

Local Educational Programs:

Program	Length	Certification	Institutions
Chemical Engineering	4 years, 5 year Co-op	Bachelor of Engineering	Ryerson University, University of Toronto
Environmental Engineering Science Certificate	N/A	Certificate in Environmental Engineering Science	Ryerson University
Innis Environmental Studies Programs	4 years	Bachelor of Arts Degree/ Bachelor of Science	University of Toronto
Chemical Engineering Technology	3 years	Advanced Diploma	Seneca College, Sheridan College
Wastewater Collection	N/A	Certificate	Sheridan College
Water Distribution and Supply	N/A	Certificate	Sheridan College
Water Distribution and Wastewater Collection	N/A	Certificate	Sheridan College

The most important Essential Skills for this occupation are²:

- Writing
- Numeracy
- Document use

The most important High School subjects are³:

- Machine shop
- Computer basis
- Sciences
- English
- Math

Number of Employees by Age Range⁴:

Employees by Age Range	Peel Halton	Toronto	York Region Brad WG	Total
15 – 24 years	20	10	15	45
25 – 44 years	80	55	45	180
45 years and over	80	105	50	235
Total Employees	180	170	110	460
% 45 years +	44.44%	61.76%	45.45%	51.09%

Source: Statistics Canada, 2006 Census

Average Salary

Average Salary based on 2006 Census Data ⁴	
Peel Halton	\$ 49,128
Toronto	\$ 57,445
York Region Brad WG	\$ 59,223
Ontario	\$ 53,928

Water and Waste Plant Operator

NOC 9424

Top Industries of Employment for 3 regions^{4,5}:

Across all three regions there are 460 water and waste plant operators employed. The top industries of employment are:

Industry (NAICS)	Number of People Employed	% of Total	Number of Employers Dec 2003	Number of Employers Jun 2009	Absolute Change % 03 - 09	Change 03 - 09
221 Utilities	295	63.44%	180	281	101	56.11%
913 Local, municipal and regional public administration	40	8.60%	35	56	21	60.00%
562 Waste management & remediation services	35	7.53%	377	496	119	31.56%
332 Fabricated metal product manufacturing	30	6.45%	3024	2586	-438	-14.48%

Source: Statistics Canada, 2006 Census; Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009.

Matrix of Skills Transferability⁶:

Transferability between occupations has been analyzed using the National Occupational Coding system. Judgments have been made based on an analysis of available information regarding the overlap of knowledge and skills and labour market hiring practices for occupations. Occupations to which transferability exists are:

There are no direct occupations linked to this occupation based on the matrix of skills transferability. However, the following have been identified as related occupations:

- Machine Operators and Related Workers in Metal and Mineral Products Processing (NOC 941)
- Machine Operators and Related Workers in Pulp and Paper Production and Wood Processing (NOC 943)
- Labourers in Processing, Manufacturing and Utilities (NOC 961)
- Central Control and Process Operators in Manufacturing and Processing (NOC 923)
- Supervisors, Processing Occupations (NOC 921)

Local Employers:

The following list of employers was randomly selected as examples of companies employing this occupation. An attempt was made to represent a company from each local board area.

Greenflow Environmental Svc

2-4151 Morris Drive
Burlington, Ontario L7L 5L5
Telephone: 1 905 333 3004
Fax: 1 905 333 1306
www.greenflow.com

Martech Group Inc.

50 Paxman Road, Unit 18
Etobicoke, Ontario M9C 1B7
Telephone: 1 416 291 4663
www.martechgroup.ca

H2flow

470 North Rivermede Road, Unit 7
Concord, Ontario L4K 3R8
Telephone: 1 905 660 9775
Fax: 1 905 660 9744
www.h2flow.com

For a more complete listing of potential employers please visit www.labourmarketinformation.ca.

ENDNOTES

¹Human Resources Skills Development Canada. National Occupational Classification System 2006. www5.hrsdc.gc.ca/NOC.

²Human Resources Skills Development Canada. Essential Skills Profiles. www.hrsdc.gc.ca/eng/workplaceskills/essential_skills/general/home.shtml

³Service Canada. Job Futures – National Edition. 2007. www.jobfutures.ca.

⁴Statistics Canada. 2006 Census. www.statcan.gc.ca.
Note: These salaries represent an average of both unionized and non-unionized workers. Salaries may vary by workplace.

⁵Statistics Canada. Canadian Business Patterns Data. December 2003, June 2009. www.statcan.gc.ca.

⁶Human Resources Skills Development Canada. Matrix of Skills Transferability – January 2003. www.hrsdc.gc.ca.