

# Appendices

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## Appendices

### Key Informants Interviewed

- Greg Parsons, Perkins+Will
- Sharon Mittmann, City of Mississauga (Urban Planning)
- Udo Schliemann, Entro Communications
- Laurie Belzak, City of Toronto (Economic Development and Culture)
- Gelare Danaie, dexd (architecture and design)
- Denise Santini, RED Studio Inc. Architects
- Bob Kirke, Canadian Apparel Federation
- Sage Paul, Indigenous Fashion Arts and Indigenous Fashion Week
- Dylan Horvath, Cortex Design
- Robert Walter-Joseph, Gladki Planning Associates
- Kaylyn Belcourt, Copernicus Educational Products
- Arlene Gould, Strategic Director DIAC and Design Educator and Researcher
- Abigail Moriah, Black Planning Project

### Design Industry Advisory Committee (DIAC) Board (Project Advisory Board)

- Francesco Martire, Ontario Association of Architects, Ontario Association of Landscape Architects
- Norm Lourenco, Association of Registered Graphic Designers
- Laurie Belzak, City of Toronto
- Tim Poupore, Association of Chartered Industrial Designers of Ontario
- Lisa Fulford-Roy, Interior Designers of Canada
- Scott Grant, Association of Chartered Industrial Designers of Ontario
- Anna Kao, Ontario Association of Architects, Toronto Society of Architects
- Sharon Mittmann, Ontario Professional Planners Institute
- Greg Parsons, Interior Designers of Canada
- Jimmy Rogers, Association of Chartered Industrial Designers of Ontario
- Udo Schliemann, Association of Registered Graphic Designers
- Eldon Theodore, Ontario Professional Planners Institute
- Barbora Vokac Taylor, Ontario Association of Architects, Toronto Society of Architects
- Arlene Gould, Strategic Director

### Interview Guide (open-ended conversation)

#### Design Practitioners

- Complete with 6-10 people
- Representation across the Design Disciplines
- Design Firms and “in-house” designers
- Focus on Management, those overseeing Designers and company strategy
  - Also, some mid-career

- Large (US-owned) and small firms
  - Some could be independent consultants
- Attempt diversity – maybe some specifically targeted
  - Black Planning Project, Black Architects and Interior Designers Association, others

### **Scheduling Invitation**

- Brief overview of project; TWIG background; role of DIAC
  - TWIG – Toronto (but GTA)
  - Industry Sector Report as part of MLTSD funding
- Use of interview findings; value as expert key-informant
- Key Topics: Long-Term Trends, Employees & Recruitment, Inclusion in the Design Sector
- Final deliverable and timing
- Semi-structured 45 minutes; open-ended 15 minutes
- Via Zoom & Recorded
- Chatham House Rules; Approval for Quotes

### **Before Interview Start**

- Thank the participant(s) for setting time aside.
- Tell participant the interview will take 60 minutes
- Introduce self and role
- Three topics at 15 minutes each
- Additional “anything else?” at the end
- “Chatham House Rules”
- But, could attribute a quote after separate confirmation and permission
- Open-Ended Conversation
- Topics presented ahead of time in invitation
- Basic information on project in invitation; any questions about the project?
- Recording; Chatham House; Approval for Quotes
- Confidentiality and Security recording and notes (all only local storage)
- Point out that the interviewee does not have to answer any questions or provide information that he/she does not feel comfortable sharing

#### **A. Basic Information**

1. Name / Role
2. Company/Organization
3. Location
4. Design Discipline
5. Firm Size (# Employees; local/global)

#### **B. Long-Term Trends**

1. What is the current state of the Design Sector/Design Industry (focused on your discipline) in the GTA? What is changing? What concerns you? What excites you?

- a. What specific advantages do you find with working in Toronto?
  - b. How has regulation impacted the Design Sector or your discipline?
2. The acquisition of small and mid-sized local firms by international organizations has been noted.
  - a. What do you see as concerning? For example, is there hollowing out?
  - b. What do you see as beneficial? For example, is it increasing market access or providing opportunities for collaboration abroad?
  - c. Do you see it as an overall positive or negative?
3. Covid-19 has had wide-ranging impacts. What do you see as being the lasting impacts on your business and industry?
  - a. How has the designer/client relationship changed?
  - b. How have client retention and new business development changed?

### **C. Employees & Recruitment**

1. What are your greatest challenges with recruiting new employees and/or retaining existing ones?
  - a. Which is currently more challenging?
  - b. Do you think that will change? If yes, when and why?
  - c. How do you recruit and from where?
2. What gaps in students/interns/recruits/new hires do you see for specific skills or other desirable employee characteristics?
  - a. Which gaps are the greatest challenge?
3. How do designers in your industry transition between employers, industries, roles within a company?
  - a. Which transitions are easiest and why?
  - b. Which are the most difficult and why?

### **D. Inclusion in Design**

1. How is your firm/organization increasing equity, diversity and inclusion? How are you increasing equity, diversity and inclusion in leadership?
  - a. How are you personally increasing equity, diversity and inclusion?
2. If not addressed already, what are you doing to increase women in leadership and upper management positions?
  - a. Do you have succession planning in place?
  - b. If yes, what challenges are you encountering with succession planning?
3. What are you doing to engage the potential of New Canadians?

### **E. Anything Else You Would Like to Add?**

## **Notes on Design Engineers**

Across Ontario over the past 12 months (from Burning Glass as of July 28, 2021)

For jobs with design and engineer (but as separate words)

15,073 postings

9,404 postings just in Toronto CMA



Top occupations: Software engineers, computer engineers, electrical engineers, etc.

83 Architect postings show up at about #25 on the list

Top industries: Automobile, Architectural, Banks, Semiconductors & Electronics, Software

Top employers: General Motors, Advanced Micro Devices, Scotiabank, Amazon, Stantec, Hatch, SNC-Lavalin

For jobs with “design engineer” (the phrase)

940 postings

573 postings just in Toronto CMA

Top occupations: Electrical engineers, mechanical engineers, computer engineers, software engineers, etc.

12 Graphic Designer and Illustrator postings are #9 on the list

Top industries: Semiconductors & Electronics, Architectural, Automobile

Top employers: Advanced Micro Devices, General Motors, Celestica, Synopsys, Intel, Government of Canada

For our analysis we want to exclude software and IT and any of the engineering occupations/industries but recognize they have a significant element of design within the work that they do but typically do not have formal design training. For “design engineers”, Burning Glass will list Skills derived from the job postings. For Toronto for the top skills listed, Design doesn’t show up until #25 (52 of 573 postings) with “Digital design”. “Graphic and Visual Design of Software” is #48 (24 postings) and “Industrial Design” is #51 (23 postings). Graphic, UX/UI, and Presentation Design make the list but with only a small number of postings. Even when looking to hire a “design engineer” or a job that includes that in the description, employers aren’t expecting a lot of design skills.

## Data Sources

Statistics Canada: 2016 Census of Population; Canadian Business Counts, 2016-2020

Burning Glass: job postings 2013-2021

## What is the Design Sector?

This section documents the initial conception and research on the definitions of the design sector. This includes alternate definitions and alternative considerations.

### Occupations

The occupations with blue shading are ones that are “technical support” occupations. Generally, they are jobs that support the other more skilled positions. I think we should include them. They allow for discussion outside of jobs requiring at least a university degree.

Here is the Statistics Canada NOC (National Occupation Classification) definition for 5244:

Artisans and craftspersons use manual and artistic skills to design and make ornamental objects, pottery, stained glass, jewellery, rugs, blankets, other handicrafts and artistic floral arrangements. Makers of musical instruments are also included in this unit group. Most craftspersons are self-employed. Artistic floral arrangers are usually employed in florist shops and floral departments of retail establishments, or may be self-employed. Craft instructors are also included in this unit group and are employed by artisan guilds, colleges, private studios and recreational organizations.

Their notes on Employment Requirements:

- Skills are often learned through apprenticeship with a master craftsperson.
- Training programs are offered by artisan guilds, colleges and private studios.
- Creative ability and talent, as demonstrated by a portfolio of work, and knowledge of safe handling of material, tools and equipment are required.
- A college diploma in fine craft techniques may be required.

And “Illustrative Example” Job Titles:

artistic floral arranger	potter
carver	screen printing artisan
craft instructor (except education)	silversmith
craftsperson	stained glass artist
glass blower	stringed instrument maker
lace weaver - arts and crafts	totem pole carver
leather worker	weaver - arts and crafts
metal arts worker	

This isn't something to include for the numbers. As of the last Census (2016), the Toronto Region had 1,990 people working in this occupation (975 were self-employed). But, they seem like a cross between a full design job (like Fashion Designer) and the technical support jobs (like Patternmaker).

Additional Occupations to be included:

Code	Title
0212	Architecture and science managers
2151	Architects
2152	Landscape architects
2153	Urban and land use planners
2154	Land surveyors
2225	Landscape and horticulture technicians and specialists
2251	Architectural technologists and technicians
2252	Industrial designers
2253	Drafting technologists and technicians
2254	Land survey technologists and technicians
5223	Graphic arts technicians
5241	Graphic designers and illustrators
5242	Interior designers and interior decorators
5243	Theatre, fashion, exhibit and other creative designers
5245	Patternmakers - textile, leather and fur products
9217	Supervisors, textile, fabric, fur and leather products processing and manufacturing

## Burning Glass Occupations

Burning Glass reports 182 separate job titles from job postings that had at least 10 postings within the past 12 months that include any of the following skills

### Design Skills

- Animation and Game Design
- Art and Illustration
- Creative Design
- Digital Design
- Graphic and Visual Design
- Graphic and Visual Design Software
- Industrial Design
- Presentation Design
- User Interface and User Experience (UI/UX) Design

### Architecture and Construction Skills

- Architectural Design
- Carpentry
- Conduits
- Construction Inspection
- Construction Labor
- Construction Management
- Construction Painting
- Drywall
- Electrical Construction
- Estimating

General Architecture  
 Green Architecture  
 Insulation  
 Masonry  
 Road and Bridge Construction  
 Roofing

Top 15 Jobs by Number of Postings (from Burning Glass as of June 30, 2021)

Occupation Title	Job Postings
Software Developer / Engineer	1,241
Project Manager	698
Business / Management Analyst	530
Marketing Specialist	486
UI / UX Designer / Developer	466
Graphic Designer / Desktop Publisher	455
Systems Analyst	401
Web Developer	377
Construction Manager	374
Marketing Manager	370
Civil Engineer	331
IT Project Manager	322
Product Manager	262
Industrial Designer	259
Public Relations / Communications Specialist	237

## Industries

Photographers and artisans. They are similar to the Artists and Craftpersons occupation. If we include that occupation, we should include these industries.

Industries to be included.

Code	Industry Title
541310	Architectural services
541320	Landscape architectural services
541410	Interior design services
541420	Industrial design services
541430	Graphic design services
541490	Other specialized design services
Could also use the “industry group” (4-digit NAICS code)	
5413	Architectural, engineering and related services
5414	Specialized design services

Using the industry groups includes additional industries but often data is only reported at the 4-digit level. It brings back the discussion of “design engineer”. Firms and employment can be estimated at the 6-digit, detailed industry level. When the 4-digit must be used it can be adjusted proportionally.

541310	Architectural services
541320	Landscape architectural services
541330	Engineering services
541340	Drafting services
541350	Building inspection services
541360	Geophysical surveying and mapping services
541370	Surveying and mapping (except geophysical) services
541380	Testing laboratories
541410	Interior design services
541420	Industrial design services
541430	Graphic design services
541490	Other specialized design services

## Burning Glass Industries

Burning Glass reports 194 separate industries with at least 1 job postings within the past 12 months that included any of the Design or Architecture and Construction skills (same as listed above).

Top 15 Industries by Number of Postings (from Burning Glass as of June 30, 2021)

NAICS Code	Industry	Job Postings
5221	Depository Credit Intermediation	1,003
5413	Architectural, Engineering, and Related Services	807
5241	Insurance Carriers	459
5414	Specialized Design Services	424
5416	Management, Scientific, and Technical Consulting Services	385
6113	Colleges, Universities, and Professional Schools	372
6221	General Medical and Surgical Hospitals	235
2362	Nonresidential Building Construction	232
5171	Wired Telecommunications Carriers	214
9211	Executive, Legislative, and Other General Government Support	183
5415	Computer Systems Design and Related Services	163
5112	Software Publishers	163
3344	Semiconductor and Other Electronic Component Manufacturing	154

5419	Other Professional, Scientific, and Technical Services	144
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	139

## Occupation Profiles

### Architecture and science managers (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. They are employed by a wide range of private sector and government establishments as well as by architectural firms and scientific research companies.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>• This group performs some or all of the following duties:</li> <li>• Plan, organize, direct, control and evaluate the activities and operations of an architecture, landscape architecture, scientific research and development laboratory or quality control department, service or firm</li> <li>• Develop and implement policies, standards and procedures for the architectural, scientific and technical work performed in the department, service, laboratory or firm</li> <li>• Assign, co-ordinate and review the technical work of the department or project teams</li> <li>• Recruit personnel and oversee development and maintenance of staff competence in required areas</li> <li>• May participate directly in the design, development and inspection of technical projects or in the theoretical or applied scientific work of the department</li> <li>• May consult and negotiate with clients to prepare specifications, explain proposals or present architectural or scientific research reports and findings.</li> </ul>	<ul style="list-style-type: none"> <li>• Architecture managers require a degree in architecture, registration as a professional architect and several years of experience as an architect.</li> <li>• Landscape architecture managers require a degree in landscape architecture, licensing as a professional landscape architect and several years of experience as a landscape architect.</li> <li>• Science and other managers in this unit group require a master's or doctoral degree in a scientific discipline and several years of experience in a related scientific discipline.</li> </ul>

## Job Titles

Illustrative Titles	Other Titles
agricultural chemistry branch director architectural manager chief actuary director of research - forestry director of research - manufacturing director of research - mining landscape architecture manager life sciences program manager petroleum geology department manager scientific research department manager statistical service manager	actuarial department manager agricultural chemistry branch director agricultural representatives director agricultural representatives regional manager architectural manager architectural service manager biological research department chief chemical manager chemical research division manager chief actuary clinical projects manager director of architecture director of research - forestry director of research - manufacturing director of research - mining ecological research manager ecology manager environmental science manager experimental farm superintendent geochemical manager geological manager geophysical manager laboratory director laboratory manager landscape architecture manager life sciences program manager livestock development manager livestock production programs manager livestock program development manager manufacturing research director mathematical services manager mathematics department director mathematics program manager mining research director natural sciences program manager oceanographic research director petroleum geology department manager physical sciences program manager project management chief - scientific affairs quality assurance manager - cannabis quality control director - chemistry quality control manager - pharmaceutical products research and development manager research director - forestry

research director - manufacturing  
 research director - mining  
 rural development manager  
 rural development program manager  
 scientific research department manager  
 scientific research director  
 scientific research manager  
 statistical department director  
 statistical service manager  
 urban planning and development assistant director -  
 government services  
 urban planning and development director -  
 government services  
 urban planning and renewal director - government  
 services  
 zoological garden director  
 zoological park director

### Inclusions

- None

### Exclusions

- Computer and information systems managers (See 0213 Computer and information systems managers)
- Engineering managers (See 0211 Engineering managers)
- Managers in natural resources production and fishing (See 0811 Managers in natural resources production and fishing)
- Science professionals and supervisors of science professionals (See 21 Professional occupations in natural and applied sciences)

### Additional Information

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

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	8,950	3,690	1,900	21.2%
Employee	8,430	3,540	1,805	21.4%
Self-Employed	515	155	90	17.5%
% Self-Employed	5.8%	4.2%	4.7%	
Average Income	108,383	111,667	119,916	110.6%
Median Income	93,471	98,285	101,936	109.1%



### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	65	35	25	38.5%
15-19	0	0	0	#N/A
20-24	65	35	25	38.5%
<b>25-64</b>	8,605	3,535	1,820	21.2%
25-34	1,120	420	205	18.3%
25-29	385	180	95	24.7%
30-34	745	240	110	14.8%
35-44	2,855	1,190	625	21.9%
45-54	2,995	1,245	660	22.0%
55-64	1,625	685	335	20.6%
<b>65-74</b>	260	125	55	21.2%
<b>75+</b>	15	0	0	0.0%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	0.0%
Secondary (high) school diploma or equivalency certificate	0.0%
Apprenticeship or trades certificate or diploma	0.0%
College, CEGEP or other non-university certificate or diploma	11.4%
University certificate or diploma below bachelor level	2.1%
University certificate, diploma or degree at bachelor level or above	85.6%

### Gender (Toronto, 2016)

Female	44.7%
Male	55.1%

## Architects (2151)

Architects conceptualize, plan and develop designs for the construction and renovation of commercial, institutional and residential buildings. They are employed by architectural firms, private corporations and governments, or they may be self-employed.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>• This group performs some or all of the following duties:</li> <li>• Consult with clients to determine the type, style and purpose of renovations or new building construction being considered</li> <li>• Conceptualize and design buildings and develop plans describing design specifications, building materials, costs and construction schedules</li> <li>• Prepare sketches and models for clients</li> <li>• Prepare or supervise the preparation of drawings, specifications and other construction documents for use by contractors and tradespersons</li> <li>• Prepare bidding documents, participate in contract negotiations and award construction contracts</li> <li>• Monitor activities on construction sites to ensure compliance with specifications</li> <li>• Conduct feasibility studies and financial analyses of building projects.</li> <li>• Architects may specialize in a particular type of construction such as residential, commercial, industrial or institutional.</li> </ul>	<ul style="list-style-type: none"> <li>• A bachelor's degree from an accredited school of architecture or Completion of the syllabus of studies from the Royal Architectural Institute of Canada (RAIC) is required.</li> <li>• A master's degree in architecture may be required.</li> <li>• Completion of a three-year internship under the supervision of a registered architect is required.</li> <li>• Completion of the architect registration examination is required.</li> <li>• Registration with a provincial regulatory body is required in all provinces and the Northwest Territories.</li> <li>• Leadership in Energy and Environmental Design (LEED) certification is offered by the Canada Green Building Council and may be required by some employers.</li> </ul>

### Job Titles

Illustrative Titles	Other Titles
architect architectural standards specialist chief architect consulting architect	architect architectural standards specialist chief architect consulting architect industrial and commercial buildings architect

industrial and commercial  
buildings architect  
residential architect

residential architect  
residential building architect

### Inclusions

- None

### Exclusions

- Architecture and science managers (See 0212 Architecture and science managers)
- Database architects (See 2172 Database analysts and data administrators)
- Landscape architects (See 2152 Landscape architects)
- Naval architects (See 2148 Other professional engineers, n.e.c.)
- Software architects (See 2173 Software engineers and designers)
- Structural engineers (See 2131 Civil engineers)
- Technical architects, hardware (See 2147 Computer engineers (except software engineers and designers))

### Additional Information

- Progression to senior positions, such as chief architect, is possible with experience.

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	17,205	6,855	5,110	29.7%
Employee	12,135	4,930	3,745	30.9%
Self-Employed	5,065	1,925	1,365	26.9%
% Self-Employed	29.4%	28.1%	26.7%	
Average Income	73,272	77,329	78,773	107.5%
Median Income	61,468	62,539	62,936	102.4%

## Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	360	185	125	34.7%
15-19	0	0	0	#N/A
20-24	360	185	125	34.7%
<b>25-64</b>	15,350	6,110	4,625	30.1%
25-34	4,130	1,655	1,285	31.1%
25-29	1,815	720	560	30.9%
30-34	2,315	935	720	31.1%
35-44	4,405	1,715	1,330	30.2%
45-54	3,805	1,455	1,135	29.8%
55-64	3,010	1,285	875	29.1%
<b>65-74</b>	1,195	440	270	22.6%
<b>75+</b>	295	115	90	30.5%

## Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	0.2%
Secondary (high) school diploma or equivalency certificate	1.2%
Apprenticeship or trades certificate or diploma	0.2%
College, CEGEP or other non-university certificate or diploma	4.3%
University certificate or diploma below bachelor level	1.5%
University certificate, diploma or degree at bachelor level or above	92.5%

## Gender (Toronto, 2016)

Female	31.5%
Male	68.4%

## Landscape architects (2152)

Landscape architects conceptualize, design, plan and manage the construction of natural, cultural and built landscape development for commercial projects, office complexes, parks, golf courses and residential development. They are employed by government environmental and development agencies, landscape consulting firms and by architectural and engineering firms, or they are self-employed.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"><li>• This group performs some or all of the following duties:</li><li>• Confer with clients to determine design needs</li><li>• Survey and assess designated sites and develop designs taking into consideration landscape features, buildings, climate, future usage and other aspects</li><li>• Prepare or oversee the preparation of detailed drawings for sites, including features such as trees, shrubs, gardens, lighting, walkways, patios, decks, benches, fences, retaining walls and fountains</li><li>• Prepare or oversee preparation of site plans, reports, sketches, models, photographs, maps, land use studies, design plans such as landscape grading, drainage or planting, and construction details</li><li>• Estimate costs, prepare specifications and evaluate tenders for landscape construction projects</li><li>• Conduct environmental design studies, including environmental assessment, planning and the preservation and re-creation of historical sites</li><li>• Conduct community and neighbourhood physical planning studies, participate in multidisciplinary urban design studies, prepare design guidelines, and develop master plans</li><li>• May manage and supervise landscape construction work.</li></ul>	<ul style="list-style-type: none"><li>• A bachelor's degree in landscape architecture is required.</li><li>• A master's degree in landscape architecture may be required.</li><li>• Registration with a regulatory body is required in Ontario, Alberta and British Columbia.</li><li>• In the remaining provinces and territories, landscape architects usually require two years of landscape design experience and an interview by their respective provincial associations to receive association certification.</li><li>• Leadership in Energy and Environmental Design (LEED) certification is offered by the Canada Green Building Council and may be required by some employers.</li></ul>

## Job Titles

Illustrative Titles	Other Titles
landscape architect	landscape architect
senior landscape architect	senior landscape architect

### Inclusions

- None

### Exclusions

- Architects (See 2151 Architects)
- Landscape and horticulture technicians and specialists (See 2225 Landscape and horticulture technicians and specialists)
- Landscape architecture managers (See 0212 Architecture and science managers)
- Landscape design contractors (See 8255 Contractors and supervisors, landscaping, grounds maintenance and horticulture services)
- Urban and land use planners (See 2153 Urban and land use planners)

### Additional Information

- None

## Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	2,125	940	535	25.2%
Employee	1,550	680	410	26.5%
Self-Employed	575	265	125	21.7%
% Self-Employed	27.1%	28.2%	23.4%	
Average Income	61,185	62,936	72,276	118.1%
Median Income	55,526	56,245	65,803	118.5%

## Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	95	60	25	26.3%
15-19	0	0	0	#N/A
20-24	95	60	25	26.3%
<b>25-64</b>	1,900	805	465	24.5%

25-34	475	205	135	28.4%
25-29	190	105	70	36.8%
30-34	285	100	70	24.6%
35-44	580	210	125	21.6%
45-54	390	180	100	25.6%
55-64	455	210	115	25.3%
<b>65-74</b>	110	65	25	22.7%
<b>75+</b>	15	10	10	66.7%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	0.0%
Secondary (high) school diploma or equivalency certificate	2.0%
Apprenticeship or trades certificate or diploma	0.0%
College, CEGEP or other non-university certificate or diploma	5.9%
University certificate or diploma below bachelor level	4.0%
University certificate, diploma or degree at bachelor level or above	90.1%

### Gender (Toronto, 2016)

Female	44.6%
Male	56.4%

### Urban and land use planners (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 are employed by all levels of government, land developers, engineering and other consulting companies, or may work as private consultants.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>This group performs some or all of the following duties:</li> <li>Compile and analyze data on demographic, economic, legal, political,</li> </ul>	<ul style="list-style-type: none"> <li>A bachelor's degree in urban and regional planning, geography, architecture,</li> </ul>

cultural, sociological, physical and other factors affecting land use

- Confer with municipal, provincial and federal authorities, civic leaders, social scientists, lawyers, land developers, the public and special interest groups to formulate and develop land use or community plans
- Prepare and recommend land development concepts and plans for zoning, subdivisions, transportation, public utilities, community facilities, parks, agricultural and other land uses
- Prepare plans for environmental protection, such as wildlife preserves, national and provincial parks, and protection of watersheds
- Present plans to civic, rural and regional authorities and hold public meetings to present plans, proposals or planning studies to the general public and special interest groups
- Review and evaluate proposals for land use and development plans and prepare recommendations
- Process application for land development permits and administer land use plans and zoning by-laws
- Formulate long-range objectives and policies relative to future land use and the protection of the environment
- Supervise and co-ordinate work of urban planning technicians and technologists.

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.
- Urban and land use planners are regulated in Nova Scotia, New Brunswick, Quebec, Alberta, the Northwest Territories and Nunavut, and membership in a provincial planning institute may be required in other provinces.
- Leadership in Energy and Environmental Design (LEED) certification is offered by the Canada Green Building Council and may be required by some employers.

## Job Titles

Illustrative Titles	Other Titles
community and urban planner	city planner
environmental planner	city planner - land use
land use planner	community and urban planner
municipal planner	community planner
park planner	community recreation planner
planner	environmental planner
recreation planner	heritage planner - land use



regional planner  
urban planner

heritage work planner  
land use planner  
land use specialist  
long-range planner - land use  
mass transit services analyst  
municipal park planner  
municipal planner  
neighbourhood planner  
park planner  
planner  
planning analyst - land use  
recreation planner  
regional planner  
senior planner - land use  
site planner  
town planner  
transportation planner  
transportation route planning analyst  
urban and regional planner  
urban planner  
urban renovation planner  
zoning officer - land use

### Inclusions

- None

### Exclusions

- Architects (See 2151 Architects)
- Architecture and science managers (See 0212 Architecture and science managers)
- Engineering managers (See 0211 Engineering managers)
- Land surveyors (See 2154 Land surveyors)

### Additional Information

- Progression to management positions in planning is possible with experience.

## Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	12,435	5,490	2,670	21.5%
Employee	11,375	4,995	2,435	21.4%
Self-Employed	1,065	490	235	22.1%
% Self-Employed	8.6%	8.9%	8.8%	
Average Income	74,345	72,031	75,938	102.1%
Median Income	72,542	70,511	72,662	100.2%

## Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	500	300	160	32.0%
15-19	20	20	15	75.0%
20-24	475	285	145	30.5%
<b>25-64</b>	11,330	4,900	2,420	21.4%
25-34	3,795	1,755	1,000	26.4%
25-29	1,650	810	465	28.2%
30-34	2,145	940	530	24.7%
35-44	3,210	1,290	600	18.7%
45-54	2,530	1,065	475	18.8%
55-64	1,800	790	350	19.4%
<b>65-74</b>	575	275	75	13.0%
<b>75+</b>	30	15	15	50.0%

## Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	0.0%
Secondary (high) school diploma or equivalency certificate	5.4%
Apprenticeship or trades certificate or diploma	0.6%
College, CEGEP or other non-university certificate or diploma	5.3%
University certificate or diploma below bachelor level	1.1%
University certificate, diploma or degree at bachelor level or above	87.4%

## Gender (Toronto, 2016)

Female	45.0%
Male	55.0%

## Land surveyors (2154)

Land surveyors plan, direct and conduct legal surveys to establish the location of real property boundaries, contours and other natural or human-made features, and prepare and maintain cross-sectional drawings, official plans, records and documents pertaining to these surveys. They are employed by federal, provincial and municipal governments, private sector land surveying establishments, real estate development, natural resource, engineering and construction firms, or they may be self-employed.

## Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>This group performs some or all of the following duties:</li> <li>Develop survey plans, methods and procedures for conducting legal surveys</li> <li>Plan, direct and supervise or conduct surveys to establish and mark legal boundaries of properties, parcels of lands, provincial and Canada Lands, Aboriginal land claims, wellsites, mining claims, utility rights-of-way, roadways and highways</li> <li>Survey and lay out subdivisions for rural and urban development</li> </ul>	<ul style="list-style-type: none"> <li>A bachelor's degree in geomatics engineering or survey engineering or A college diploma in survey science or geomatics technology with additional academic credits and successful completion of equivalent examinations set by a regional board of examiners for land surveyors is required.</li> </ul>

- Determine precise locations using electronic distance measuring equipment and global positioning systems (GPS)
- Analyze, manage and display data using geographic information systems (GIS) and computer-aided design and drafting (CAD)
- Record all measurements and other information obtained during survey activities
- Prepare or supervise the preparation and compilation of all data, plans, charts, records and documents related to surveys of real property boundaries
- Certify and assume liability for surveys made to establish real property boundaries
- Advise, provide consultation and testify as an expert witness on matters related to legal surveys
- May supervise other land surveyors, and land survey technologists and technicians.
- A one- to three-year articling period is required.
- Successful completion of professional land surveyor examinations is required.
- A federal or provincial land surveyor's licence is required.

## Job Titles

Illustrative Titles	Other Titles
Engineering managers (See 0211 Engineering managers)	Engineering managers (See 0211 Engineering managers)
Engineering technologists and technicians who apply geotechnical and topographical information to land use and urban planning (See 2231 Civil engineering technologists and technicians)	Engineering technologists and technicians who apply geotechnical and topographical information to land use and urban planning (See 2231 Civil engineering technologists and technicians)
Geomatics and survey engineers (See 2131 Civil engineers)	Geomatics and survey engineers (See 2131 Civil engineers)
Hydrographic surveyors (See 2113 Geoscientists and oceanographers)	Hydrographic surveyors (See 2113 Geoscientists and oceanographers)
Land survey technologists and technicians (See 2254 Land	Land survey technologists and technicians (See 2254 Land survey technologists and technicians)
	Technical occupations in geomatics and meteorology (See 2255 Technical occupations in geomatics and meteorology)
	Urban and land use planners (See 2153 Urban and land use planners)

survey technologists and technicians)  
 Technical occupations in geomatics and meteorology (See 2255 Technical occupations in geomatics and meteorology)  
 Urban and land use planners (See 2153 Urban and land use planners)

### Inclusions

- None

### Exclusions

- Engineering managers (See 0211 Engineering managers)
- Engineering technologists and technicians who apply geotechnical and topographical information to land use and urban planning (See 2231 Civil engineering technologists and technicians)
- Geomatics and survey engineers (See 2131 Civil engineers)
- Hydrographic surveyors (See 2113 Geoscientists and oceanographers)
- Land survey technologists and technicians (See 2254 Land survey technologists and technicians)
- Technical occupations in geomatics and meteorology (See 2255 Technical occupations in geomatics and meteorology)
- Urban and land use planners (See 2153 Urban and land use planners)

### Additional Information

- Federal statutes require a separate licence from the Association of Canada Land Surveyors to survey areas such as national parks, Aboriginal lands, offshore areas and northern territories.

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	7,755	2,025	810	10.4%
Employee	6,655	1,775	730	11.0%
Self-Employed	1,100	250	80	7.3%
% Self-Employed	14.2%	12.3%	9.9%	
Average Income	79,732	84,151	118,685	148.9%
Median Income	65,397	59,583	62,532	95.6%

## Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	90	45	20	22.2%
15-19	0	0	0	#N/A
20-24	90	45	20	22.2%
<b>25-64</b>	7,230	1,845	745	10.3%
25-34	2,280	460	185	8.1%
25-29	1,135	230	95	8.4%
30-34	1,140	235	90	7.9%
35-44	1,775	325	145	8.2%
45-54	1,690	555	190	11.2%
55-64	1,495	500	225	15.1%
<b>65-74</b>	380	100	40	10.5%
<b>75+</b>	45	30	0	0.0%

## Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	0.0%
Secondary (high) school diploma or equivalency certificate	13.5%
Apprenticeship or trades certificate or diploma	3.1%
College, CEGEP or other non-university certificate or diploma	19.6%
University certificate or diploma below bachelor level	4.9%
University certificate, diploma or degree at bachelor level or above	58.3%

## Gender (Toronto, 2016)

Female	8.6%
Male	91.4%

## Landscape and horticulture technicians and specialists (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 such as irrigation; breed, cultivate and study plants; and treat injured and diseased trees and plants. They are employed by landscape designers and contractors, lawn service and tree care establishments, golf courses, nurseries and greenhouses, and municipal, provincial and national parks, or they may be self-employed.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"><li>• This group performs some or all of the following duties:</li><li>• Arborists and tree service technicians</li><li>• Examine trees and shrubs to diagnose problems and disease, and apply various treatments such as pruning, spraying, repairing damaged areas and injecting with treatment solutions.</li><li>• Golf course superintendents</li><li>• Direct crews who maintain the health and appearance of golf courses and their surrounding landscapes, plant and move trees, and apply fertilizers, fungicides, herbicides and pesticides.</li><li>• Horticulturists</li><li>• Plan and co-ordinate the growth and use of plants for landscaping, ornamental uses and other purposes.</li><li>• Landscape designers and landscape architectural technicians and technologists</li><li>• Survey and assess sites, prepare drawings, sketches and reports and perform other duties to assist landscape architects in designing landscaped environments.</li><li>• Landscape gardeners</li><li>• Plant and maintain private and public lawns and gardens.</li><li>• Landscapers</li><li>• Plan and construct landscaped environments which may include trees,</li></ul>	<ul style="list-style-type: none"><li>• Completion of a university or college program in agronomy, arboriculture, horticulture, landscaping, landscape design or landscape technology is usually required.</li><li>• Experience as a landscape and grounds maintenance labourer may be required for golf course superintendents, landscape gardeners and landscapers.</li><li>• An apprenticeship program is available for horticulturists, arboriculturists and landscape gardeners.</li><li>• Trade certification for landscape horticulturists is available, but voluntary, in all provinces.</li><li>• A provincial licence to apply chemical fertilizers, fungicides, herbicides and pesticides may be required.</li><li>• In Quebec, membership in the regulatory body is required to use the title of Professional Technologist.</li><li>• Red Seal endorsement is also available to qualified landscape horticulturists</li></ul>

- shrubberies, lawns, fences, decks, patios and other landscape structures.
- Lawn care specialists
  - Visit clients, assess the health of lawns, and apply fertilizer, pesticides and other lawn care products.

upon successful completion of the interprovincial Red Seal examination.

## Job Titles

Illustrative Titles	Other Titles
arborist	arboriculturist
golf course superintendent	arborist
greenskeeper	cloning technician - cannabis
horticultural technician	cultivation technician
horticulture specialist	floriculturist
horticulturist	gardener
hydroponics technician	golf course superintendent
landscape architectural technician	greens superintendent
landscape designer	greenskeeper
landscape gardener	horticultural technician
landscape technician	horticultural technologist
landscaper	horticulture specialist
lawn care specialist	horticulture technician
tree service technician	horticulture technologist
	horticulturist
	hydroponics technician
	interior plantscape specialist
	irrigation technician (except agriculture)
	landscape architectural technician
	landscape architectural technologist
	landscape designer
	landscape gardener
	landscape horticulturist
	landscape technician
	landscaper
	lawn care specialist
	lawn care superintendent
	plant doctor
	plantscape technician
	tree and shrub specialist
	tree service technician
	turfgrass management specialist

## Inclusions

- None



## Exclusions

- Biological technologists and technicians (See 2221 Biological technologists and technicians)
- Botanists (See 2121 Biologists and related scientists)
- Contractors and supervisors, landscaping, grounds maintenance and horticulture services (See 8255 Contractors and supervisors, landscaping, grounds maintenance and horticulture services)
- Forestry technologists and technicians (See 2223 Forestry technologists and technicians)
- Landscape architects (See 2152 Landscape architects)
- Managers in horticulture (See 0822 Managers in horticulture)
- Nursery and greenhouse workers (See 8432 Nursery and greenhouse workers)

## Additional Information

- The Red Seal endorsement allows for interprovincial mobility.

## Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	19,635	7,050	2,295	11.7%
Employee	15,030	5,445	1,725	11.5%
Self-Employed	4,605	1,610	570	12.4%
% Self-Employed	23.5%	22.8%	24.8%	
Average Income	32,438	34,815	35,170	108.4%
Median Income	25,812	29,743	30,432	117.9%

## Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	2,220	1,110	335	15.1%
15-19	355	175	55	15.5%
20-24	1,865	930	275	14.7%
<b>25-64</b>	16,515	5,620	1,855	11.2%
25-34	5,120	2,070	680	13.3%
25-29	2,430	1,020	310	12.8%
30-34	2,690	1,050	375	13.9%

35-44	3,950	1,325	440	11.1%
45-54	3,975	1,270	445	11.2%
55-64	3,470	960	285	8.2%
<b>65-74</b>	745	270	90	12.1%
<b>75+</b>	150	55	15	10.0%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	6.7%
Secondary (high) school diploma or equivalency certificate	20.0%
Apprenticeship or trades certificate or diploma	8.0%
College, CEGEP or other non-university certificate or diploma	30.8%
University certificate or diploma below bachelor level	5.3%
University certificate, diploma or degree at bachelor level or above	29.2%

### Gender (Toronto, 2016)

Female	27.3%
Male	72.7%

### Architectural technologists and technicians (2251)

Architectural technologists and technicians may work independently or provide technical assistance to professional architects and civil design engineers in conducting research, preparing drawings, architectural models, specifications and contracts and in supervising construction projects. They are employed by architectural and construction firms, and governments.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>This group performs some or all of the following duties:</li> <li>Assist in the development of architectural designs</li> <li>Analyze building codes, by-laws, space requirements, site requirements and other technical documents and reports</li> </ul>	<ul style="list-style-type: none"> <li>Completion of a two- to three-year college program in architectural technology or a related subject is usually required.</li> <li>Certification in architectural technology or in a related field through provincial</li> </ul>

- Prepare manual and CAD (computer-assisted design) drawings, specifications, cost estimates and listings of quantities of material from conceptual drawings and instructions
- Construct architectural and display models, and 3-D virtual models of architectural designs
- Prepare contract and bidding documents
- May supervise drafters, technicians and technologists on the architectural team
- May supervise construction projects and co-ordinate, monitor and inspect work done by others.

associations of architectural or engineering/applied science technologists and technicians may be required by employers.

- A period of supervised work experience, usually two years, is required before certification.
- Membership in the provincial regulatory body is mandatory in British Columbia.
- In Quebec, membership in the regulatory body for professional technologists is required to use the title "Professional Technologist."

## Job Titles

Illustrative Titles	Other Titles
architectural design technician	architectural assistant
architectural design technologist	architectural design technician
architectural technician	architectural design technologist
architectural technologist	architectural technician
	architectural technologist
	registered building technician
	registered building technologist
	residential buildings technologist

## Inclusions

- None

## Exclusions

- Architects (See 2151 Architects)
- Civil engineering technologists and technicians (See 2231 Civil engineering technologists and technicians)
- Construction estimators (See 2234 Construction estimators)
- Construction inspectors (See 2264 Construction inspectors)
- Construction managers (See 0711 Construction managers)
- Drafting technologists and technicians (See 2253 Drafting technologists and technicians)
- Land survey technologists and technicians (See 2254 Land survey technologists and technicians)

## Additional Information

- There is mobility to other related occupations such as drafters, civil engineering technologists and technicians, construction estimators and construction inspectors.
- Progression to supervisory positions is possible with experience.

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	10,690	4,225	2,295	21.5%
Employee	8,940	3,445	1,855	20.7%
Self-Employed	1,755	775	440	25.1%
% Self-Employed	16.4%	18.3%	19.2%	
Average Income	50,933	50,908	50,927	100.0%
Median Income	48,012	49,064	48,808	101.7%

### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	1,215	505	270	22.2%
15-19	50	25	20	40.0%
20-24	1,165	475	250	21.5%
<b>25-64</b>	9,245	3,605	1,970	21.3%
25-34	3,445	1,370	735	21.3%
25-29	1,795	700	385	21.4%
30-34	1,655	670	350	21.1%
35-44	2,515	885	480	19.1%
45-54	2,145	900	505	23.5%
55-64	1,140	450	245	21.5%
<b>65-74</b>	200	100	55	27.5%
<b>75+</b>	30	10	10	33.3%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	0.0%

Secondary (high) school diploma or equivalency certificate	5.9%
Apprenticeship or trades certificate or diploma	0.5%
College, CEGEP or other non-university certificate or diploma	37.6%
University certificate or diploma below bachelor level	2.9%
University certificate, diploma or degree at bachelor level or above	53.2%

### Gender (Toronto, 2016)

Female	32.1%
Male	67.9%

### Industrial designers (2252)

Industrial designers conceptualize and produce designs for manufactured products. They are employed by manufacturing industries and private design firms or they may be self-employed.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>• This group performs some or all of the following duties:</li> <li>• Consult with client, engineers or production specialists to establish product requirements</li> <li>• Analyze the intended use of product and user preferences</li> <li>• Conduct research into cost, properties of production materials and methods of production</li> <li>• Develop manual and computer-assisted design (CAD) concepts, sketches or models for approval</li> <li>• Prepare manufacturing drawings, specifications and guidelines for production and construct prototype of design</li> <li>• Consult with engineers and production staff during manufacturing stage.</li> </ul>	<ul style="list-style-type: none"> <li>• A university degree in industrial design, architecture, engineering or A college diploma in industrial design is required.</li> <li>• Creative ability, as demonstrated by a portfolio of work, is required.</li> </ul>

## Job Titles

Illustrative Titles	Other Titles
furniture designer industrial design consultant industrial designer industrial products designer product designer	business products designer consumer products designer container designer ergonomic products designer fixture designer furniture designer industrial design consultant industrial designer industrial products designer product designer toy designer - industrial design

### Inclusions

- None

### Exclusions

- Architectural technologists and technicians (See 2251 Architectural technologists and technicians)
- Civil engineering design technologists (See 2231 Civil engineering technologists and technicians)
- Electrical and electronics design technologists (See 2241 Electrical and electronics engineering technologists and technicians)
- Engineering design and drafting technicians and technologists (See 2253 Drafting technologists and technicians)
- Graphic designers and illustrators (See 5241 Graphic designers and illustrators)
- Interior designers and interior decorators (See 5242 Interior designers and interior decorators)
- Mechanical engineering equipment designers (See 2232 Mechanical engineering technologists and technicians)
- Theatre, fashion, exhibit and other creative designers (See 5243 Theatre, fashion, exhibit and other creative designers)

### Additional Information

- There is mobility between positions in this unit group.
- Mobility is possible to other design occupations.

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	9,175	3,615	2,105	22.9%
Employee	7,320	2,860	1,655	22.6%
Self-Employed	1,855	755	450	24.3%
% Self-Employed	20.2%	20.9%	21.4%	
Average Income	54,828	57,804	57,565	105.0%
Median Income	49,371	53,011	51,002	103.3%

### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	650	280	165	25.4%
15-19	30	15	10	33.3%
20-24	615	265	160	26.0%
<b>25-64</b>	8,160	3,180	1,845	22.6%
25-34	2,610	1,075	690	26.4%
25-29	1,325	575	350	26.4%
30-34	1,295	505	345	26.6%
35-44	2,450	850	450	18.4%
45-54	1,870	785	465	24.9%
55-64	1,225	475	235	19.2%
<b>65-74</b>	325	135	85	26.2%
<b>75+</b>	50	20	15	30.0%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	0.0%
Secondary (high) school diploma or equivalency certificate	10.9%
Apprenticeship or trades certificate or diploma	2.2%
College, CEGEP or other non-university certificate or diploma	23.6%

University certificate or diploma below bachelor level	5.5%
University certificate, diploma or degree at bachelor level or above	58.3%

### Gender (Toronto, 2016)

Female	33.9%
Male	66.1%

### Drafting technologists and technicians (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. They are employed by consulting and construction companies, utility, resource and manufacturing companies, all levels of government and by a wide range of other establishments.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>• This group performs some or all of the following duties:</li> <li>• Drafting technologists</li> <li>• Develop and prepare engineering designs and drawings from preliminary concepts, sketches, engineering calculations, specification sheets and other data</li> <li>• Operate computer-assisted design (CAD) and drafting workstations</li> <li>• Develop and prepare design sketches</li> <li>• Complete documentation packages and produce drawing sets</li> <li>• Check and verify design drawings to conform to specifications and design data</li> <li>• Write technical reports</li> <li>• Prepare contracts and tender documents</li> <li>• Prepare construction specifications, costs and material estimates</li> <li>• Supervise and train other technologists, technicians and drafters.</li> <li>• Drafting technicians</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of secondary school is usually required.</li> <li>• 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.</li> <li>• 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.</li> <li>• Trade certification for draftspersons is available, but voluntary in Ontario.</li> <li>• Certification in engineering design and drafting</li> </ul>



- Develop and prepare engineering drawings, plans, diagrams or layouts from sketches
- Operate computer-assisted drafting equipment or a conventional drafting station.

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.

## Job Titles

Illustrative Titles	Other Titles
architectural draftsman	aeronautical draftsman
computer-assisted design and drafting technologist	air conditioning systems draftsman
computer-assisted drafting (CAD) technician	architectural draftsman
design and drafting technologist	chief draftsman
drafting office supervisor	civil draftsman
drafting technician	commercial draftsman
drafting technologist	computer-aided design (CAD) specialist - drafting
draftsman	computer-aided design (CAD) technologist
electrical draftsman	computer-aided drafting (CAD) technician
electromechanical draftsman	computer-assisted design and drafting technologist
electronic draftsman	computer-assisted drafting (CAD) draftsman - printed circuit boards
engineering design and drafting technologist	computer-assisted drafting (CAD) operator
mechanical draftsman	computer-assisted drafting (CAD) technician
steel detailer - drafting	computer-assisted electromechanical design draftsman
structural draftsman	design and drafting technologist
structural steel drafter-detailer	design draftsman
	design technician - drafting
	design technologist - drafting
	detail draftsman
	detailer
	detailer - structural steel drafter
	drafter
	drafting checker
	drafting clerk
	drafting design checker
	drafting group leader
	drafting office supervisor
	drafting supervisor
	drafting technician

drafting technologist  
drafting tracer  
draftsman/woman  
draftsperson  
draftsperson - computer-assisted design  
draftspersons supervisor  
electrical drafting supervisor  
electrical draftsperson  
electrical marine draftsperson  
electromechanical draftsperson  
electronic draftsperson  
engineering design and drafting technologist  
engineering draftsperson  
general draftsperson  
geological draftsperson  
geophysical draftsperson  
heating and ventilation systems draftsperson  
heating systems draftsperson  
hull draftsperson - shipbuilding and repair  
hydraulic machinery draftsperson  
marine drafting supervisor  
mechanical building draftsperson  
mechanical design draftsperson  
mechanical draftsperson  
mine draftsperson  
municipal draftsperson  
optical draftsperson  
petroleum exploration draftsperson  
piping draftsperson  
process piping draftsperson  
refrigeration systems draftsperson  
ship detail draftsperson  
shipbuilding draftsperson  
steel detailer - drafting  
steel frame draftsman/woman  
steel frame draftsperson  
structural draftsperson  
structural steel detailer  
structural steel drafter-detailer  
structural steel draftsperson  
survey draftsperson  
technical illustrator - drafting  
tool checker - drafting  
tool design draftsperson

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## Inclusions

- None

## Exclusions

- Architectural design technologists (See 2251 Architectural technologists and technicians)
- Civil engineering design technologists (See 2231 Civil engineering technologists and technicians)
- Electrical and electronics engineering design technologists (See 2241 Electrical and electronics engineering technologists and technicians)
- Industrial designers (See 2252 Industrial designers)
- Mechanical engineering design technologists (See 2232 Mechanical engineering technologists and technicians)

## Additional Information

- 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.

## Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	27,975	7,890	3,680	13.2%
Employee	25,280	7,225	3,380	13.4%
Self-Employed	2,690	665	305	11.3%
% Self-Employed	9.6%	8.4%	8.3%	
Average Income	52,164	49,926	47,847	91.7%
Median Income	48,347	47,903	45,080	93.2%

## Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	2,300	830	365	15.9%
15-19	185	95	50	27.0%
20-24	2,110	730	315	14.9%
<b>25-64</b>	24,725	6,675	3,130	12.7%

25-34	7,205	1,875	895	12.4%
25-29	3,475	960	455	13.1%
30-34	3,725	915	445	11.9%
35-44	7,010	1,575	720	10.3%
45-54	6,465	1,975	955	14.8%
55-64	4,050	1,255	555	13.7%
<b>65-74</b>	875	360	170	19.4%
<b>75+</b>	75	30	20	26.7%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	0.3%
Secondary (high) school diploma or equivalency certificate	11.2%
Apprenticeship or trades certificate or diploma	2.6%
College, CEGEP or other non-university certificate or diploma	35.9%
University certificate or diploma below bachelor level	3.9%
University certificate, diploma or degree at bachelor level or above	46.2%

### Gender (Toronto, 2016)

Female	32.6%
Male	67.4%

### Land survey technologists and technicians (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. They are employed by all levels of government, architectural and engineering firms, and by private sector surveying establishments.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>This group performs some or all of the following duties:</li> <li>Land survey technologists</li> </ul>	<ul style="list-style-type: none"> <li>This group performs some or all of the following duties:</li> <li>Land survey technologists</li> </ul>

- Assist survey engineers or professional surveyors to develop methods and procedures for conducting field surveys
- Conduct field surveys and operate survey instruments and computer equipment to measure distance, angles, elevations and contours
- Record measurements and other information obtained during field survey activities
- Determine precise geographic locations using global positioning systems (GPS) equipment
- Analyze latitude, longitude and angles and compute trigonometric and other calculations to plot features, contours and areas to a specific scale
- Prepare detailed drawings, charts and plans and survey notes and reports
- Supervise and co-ordinate field survey activities.
- Land survey technicians
- Participate in field surveys and operate survey instruments and devices
- Keep records, measurements and other survey information in systematic order
- Assist in the calculation, analysis and computation of measurements obtained during field surveys
- Assist in the preparation of detailed drawings, charts and plans.
- Land survey technologists and technicians may specialize in one of the following types of surveys: geodetic survey, topographic survey, legal (cadastral) survey or engineering survey.
- Assist survey engineers or professional surveyors to develop methods and procedures for conducting field surveys
- Conduct field surveys and operate survey instruments and computer equipment to measure distance, angles, elevations and contours
- Record measurements and other information obtained during field survey activities
- Determine precise geographic locations using global positioning systems (GPS) equipment
- Analyze latitude, longitude and angles and compute trigonometric and other calculations to plot features, contours and areas to a specific scale
- Prepare detailed drawings, charts and plans and survey notes and reports
- Supervise and co-ordinate field survey activities.
- Land survey technicians
- Participate in field surveys and operate survey instruments and devices
- Keep records, measurements and other survey information in systematic order
- Assist in the calculation, analysis and computation of measurements obtained during field surveys
- Assist in the preparation of detailed drawings, charts and plans.
- Land survey technologists and technicians may

specialize in one of the following types of surveys: geodetic survey, topographic survey, legal (cadastral) survey or engineering survey.

## Job Titles

Illustrative Titles	Other Titles
engineering survey technologist geodetic survey technologist geomatics technologist - land surveying land survey technician legal survey technician topographic survey technician transit operator - surveying	engineering survey technician engineering survey technologist geodetic survey technician geodetic survey technologist geomatics technician - land surveying geomatics technologist - land surveying instrument man/woman - surveying land survey technician land survey technologist legal survey assistant legal survey technician legal survey technologist plane table operator - surveying topographic survey technician topographic survey technologist transit man/woman - surveying transit operator - surveying

## Inclusions

- None

## Exclusions

- Drafting technologists and technicians (See 2253 Drafting technologists and technicians)
- Engineering technologists and technicians who apply geotechnical and topographical information to land use and urban planning (See 2231 Civil engineering technologists and technicians)
- Geological, geophysical, hydrographic and mine survey technologists (See 2212 Geological and mineral technologists and technicians)
- Land surveyors (See 2154 Land surveyors)
- Technical occupations in geomatics and meteorology (See 2255 Technical occupations in geomatics and meteorology)

## Additional Information

- 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.
- Geomatics is an interdisciplinary field encompassing the collection, analysis and presentation of geographically referenced data.

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	4,895	815	255	5.2%
Employee	4,750	780	245	5.2%
Self-Employed	145	35	10	6.9%
% Self-Employed	3.0%	4.3%	3.9%	
Average Income	46,265	41,076	42,391	91.6%
Median Income	42,704	35,961	39,446	92.4%

### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	1,095	310	85	7.8%
15-19	125	55	15	12.0%
20-24	975	250	65	6.7%
<b>25-64</b>	3,660	465	175	4.8%
25-34	1,265	205	70	5.5%
25-29	600	110	40	6.7%
30-34	670	100	35	5.2%
35-44	905	45	20	2.2%
45-54	790	110	45	5.7%
55-64	700	105	35	5.0%
<b>65-74</b>	135	40	0	0.0%
<b>75+</b>	0	0	0	#N/A

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	7.4%

Secondary (high) school diploma or equivalency certificate	24.1%
Apprenticeship or trades certificate or diploma	0.0%
College, CEGEP or other non-university certificate or diploma	33.3%
University certificate or diploma below bachelor level	0.0%
University certificate, diploma or degree at bachelor level or above	33.3%

### Gender (Toronto, 2016)

Female	18.2%
Male	81.8%

### Graphic arts technicians (5223)

Graphic arts technicians assist in conceptualizing a project, interpreting design specifications or sketches, preparing the page make-up, lay-out and lettering, and preparing production materials for press, electronic or multimedia publishing. They are employed by publishing, communications, advertising, marketing, printing and multimedia establishments, and by television and film production companies. They may also be self-employed.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>• This group performs some or all of the following duties:</li> <li>• Review the graphic designer's instructions</li> <li>• Produce or assist in developing and producing design concepts</li> <li>• Capture elements such as titles, text, drawings, illustrations, graphics, lettering and colour harmonization, using a computer</li> <li>• Produce computerized images and drawings</li> <li>• Digitize images using peripherals and transform them using retouching systems, graphic palettes or specialized software</li> <li>• Perform the layout, page make-up and placement using the conceptual mock-ups provided</li> </ul>	<ul style="list-style-type: none"> <li>• A college diploma in commercial or graphic arts, computer graphics or animated design is required.</li> <li>• Experience or training in multimedia design at a post-secondary, college or technical institution may be required.</li> <li>• Creative ability and artistic talent, as demonstrated by a portfolio of work, are required.</li> </ul>



- Produce proofs and camera-ready materials and prepare film and any other prepress materials
- Paint or ink individual cells of 2-D or 3-D animated drawings according to animator's specifications using an electronic palette
- Lay out, draw or paint letters, figures, logos and designs for windows, advertisements, billboards, vehicles, books and publications using specialized software or painting equipment
- Work in an interdisciplinary environment.

## Job Titles

Illustrative Titles	Other Titles
animated cartoon technician animation painter computer graphics technician graphics technician multimedia graphic design technician	airbrush artist animated cartoon inker animated cartoon painter animated cartoon technician animated cartoons inker and painter animation camera operator animation inker animation painter apprentice sign painter art work assembler cartoon background artist compositor - animation compositor - film computer graphics design technician computer graphics operator computer graphics technician design assistant - advertising production digital graphic design technician graphic arts assembler graphic arts copy stylist graphic arts renderer graphic arts technician graphics technician hand painter - graphic arts lettering artist mannequin artist multimedia graphic design technician multimedia graphics technician paste-up artist

photo process letterer - graphic arts  
photo stencil maker  
photograph retoucher  
photographic airbrush artist  
photographic colourist  
photography colourist  
poster layout designer  
poster painter  
rendering specialist  
screen stencil cutter - graphic arts  
sign layout detailer  
sign painter  
sign writer  
silkscreen stencil cutter  
silkscreen technician  
stencil marker  
stencil marker - graphic arts  
traffic sign painter  
video game artist  
video game designer  
vinyl lettering artist  
visual effects (VFX) artist  
visual effects artist

### Inclusions

- animation camera operator
- poster painter

### Exclusions

- Camera, platemaking and other prepress occupations (See 9472 Camera, platemaking and other prepress occupations)
- Correspondence, publication and regulatory clerks (See 1452 Correspondence, publication and regulatory clerks)
- Desktop publishing specialists (See 1423 Desktop publishing operators and related occupations)
- Graphic designers and illustrators (See 5241 Graphic designers and illustrators)

### Additional Information

- Progression to graphic designer positions is possible with experience or supplementary training.

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	9,155	1,690	1,040	11.4%
Employee	7,405	1,270	810	10.9%
Self-Employed	1,750	420	235	13.4%
% Self-Employed	19.1%	24.9%	22.6%	
Average Income	46,180	47,046	49,809	107.9%
Median Income	38,658	39,921	41,221	106.6%

### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	780	185	100	12.8%
15-19	75	25	10	13.3%
20-24	705	160	90	12.8%
<b>25-64</b>	8,150	1,450	915	11.2%
25-34	3,035	605	410	13.5%
25-29	1,355	285	215	15.9%
30-34	1,680	325	195	11.6%
35-44	2,635	295	170	6.5%
45-54	1,585	370	215	13.6%
55-64	885	175	110	12.4%
<b>65-74</b>	195	35	10	5.1%
<b>75+</b>	35	20	10	28.6%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	4.8%
Secondary (high) school diploma or equivalency certificate	14.9%
Apprenticeship or trades certificate or diploma	2.9%
College, CEGEP or other non-university certificate or diploma	38.0%

University certificate or diploma below bachelor level	3.8%
University certificate, diploma or degree at bachelor level or above	35.1%

### Gender (Toronto, 2016)

Female	27.4%
Male	72.6%

## Graphic designers and illustrators (5241)

Graphic designers conceptualize and produce graphic art and visual materials to effectively communicate information for publications, advertising, films, packaging, posters, signs and interactive media such as Web sites and CDs. This unit group also includes graphic designers who are supervisors, project managers or consultants. They are employed by advertising and graphic design firms, by establishments with advertising or communications departments and by multimedia production companies, or they may be self-employed. Illustrators conceptualize and create illustrations to represent information through images. They are almost solely self-employed.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>• This group performs some or all of the following duties:</li> <li>• Graphic designers</li> <li>• Consult with clients to establish the overall look, graphic elements and content of communications materials in order to meet their needs</li> <li>• Determine the medium best suited to produce the desired visual effect and the most appropriate vehicle for communication</li> <li>• Develop the graphic elements that meet the clients' objectives</li> <li>• Prepare sketches, layouts and graphic elements of the subjects to be rendered using traditional tools, multimedia software and image processing, layout and design software</li> <li>• Estimate cost of materials and time to complete graphic design</li> </ul>	<ul style="list-style-type: none"> <li>• A university degree in visual arts with specialization in graphic design, commercial art, graphic communications or cartooning or Completion of a college diploma program in graphic arts is required.</li> <li>• Experience or training in multimedia design at a post-secondary, college or technical institution may be required.</li> <li>• In addition to the arts, training in biology, engineering, architecture or a scientific field is usually required for medical, technical and scientific illustrators.</li> <li>• Creative ability and artistic talent, as demonstrated by a</li> </ul>

- Use existing photo and illustration banks and typography guides or hire an illustrator or photographer to produce images that meet clients' communications needs
- Establish guidelines for illustrators or photographers
- Co-ordinate all aspects of production for print, audio-visual or electronic materials, such as Web sites, CDs and interactive terminals
- Co-ordinate sub-contracting
- Work in a multidisciplinary environment
- Supervise other graphic designers or graphic arts technicians.
- Illustrators
- Consult with clients to determine the nature and content of illustrations in order to meet their communications needs
- Develop and produce realistic or representational sketches and final illustrations, by hand or using computer-assisted design (CAD) software, for printed materials such as books, magazines, packaging, greeting cards and stationery
- Assist in developing storyboards for electronic productions such as multimedia, interactive and digital products and television advertising and productions
- Produce 2-D and 3-D animated drawings or computer illustrations
- May adapt existing illustrations.
- Illustrators may specialize in a particular field such as illustrations for children, advertising, editorials, humour, or medical, scientific or technical illustration, or multimedia design.

portfolio of work, are required for graphic designers and illustrators.

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## Job Titles

Illustrative Titles	Other Titles
3D animation artist	2D animation artist

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advertising designer  
animator - animated films  
bank note designer  
cartoonist  
commercial artist  
graphic artist  
graphic designer  
graphic designer - multimedia  
illustrator  
layout designer  
medical illustrator  
multimedia illustrator  
scientific illustrator

2D animator  
3D animation artist  
3D animator  
3D artist  
3D modeler  
advertising art director  
advertising art supervisor  
advertising artist  
advertising designer  
advertising illustrator  
advertising illustrator chief  
advertising layout designer  
animated cartoon artist  
animated cartoon artist - visual arts  
animated cartoon colourist  
animation artist  
animation layout designer  
animator - animated films  
art layout designer  
artistic illustrator  
assistant animator - animated films  
background artist  
bank note designer  
biological illustrator  
business forms designer  
calligrapher  
calligraphic artist  
caricaturist  
cartoon film artist  
cartoonist  
cartoonist sketch  
catalogue illustrator  
cell animator  
character animator  
colour artist - cartoons  
colourist - cartoons  
commercial artist  
commercial design artist  
commercial designer  
communication designer  
computer animator  
computer graphics specialist  
content director  
content strategist  
cover designer  
cover page illustrator

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cybergraphic designer  
digital animator - artist  
editorial cartoonist  
electronic games designer  
fashion illustrator  
flash designer  
form layout designer  
forms designer  
graphic artist  
graphic arts room supervisor  
graphic design and illustration animator  
graphic designer  
graphic designer - multimedia  
graphic designer - multimedia, interactive or new media  
graphic designer and layout artist  
illustrator  
illustrator and graphic designer  
interactive media designer  
Internet graphic designer  
layout artist  
layout designer  
litho artist  
medical illustrator  
multimedia design specialist  
multimedia designer  
multimedia illustrator  
multimedia instructional designer and scriptor  
multimedia products designer  
multimedia products designer-ideaman/woman  
new media graphics designer  
newspaper illustrator  
package designer  
page designer  
paper securities designer  
pictographist  
political caricaturist  
political cartoonist  
poster artist  
registered graphic designer (RGD)  
scientific illustrator  
sign designer  
sports cartoonist  
storyboard artist  
title artist  
user experience designer

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wallpaper colourist  
 wallpaper designer  
 Web designer - graphic design  
 Web graphic designer  
 Web page designer

### Inclusions

- None

### Exclusions

- Advertising managers (See 0124 Advertising, marketing and public relations managers)
- Graphic arts technicians (See 5223 Graphic arts technicians)
- Interior designers and interior decorators (See 5242 Interior designers and interior decorators)
- Painters, sculptors and other visual artists (See 5136 Painters, sculptors and other visual artists)

### Additional Information

- Progression to management or senior design positions is possible with experience.
- The title "registered graphic designer" is recognized by law in Ontario.

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	62,750	27,735	17,325	27.6%
Employee	43,205	19,160	12,230	28.3%
Self-Employed	19,545	8,575	5,100	26.1%
% Self-Employed	31.1%	30.9%	29.4%	
Average Income	39,966	41,222	43,404	108.6%
Median Income	35,988	37,144	39,911	110.9%

### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	5,910	2,700	1,645	27.8%
15-19	350	125	65	18.6%
20-24	5,560	2,575	1,585	28.5%



<b>25-64</b>	55,610	24,450	15,355	27.6%
25-34	21,640	9,285	6,245	28.9%
25-29	10,615	4,715	3,130	29.5%
30-34	11,030	4,570	3,120	28.3%
35-44	17,225	7,245	4,505	26.2%
45-54	10,550	4,910	2,905	27.5%
55-64	6,190	3,015	1,695	27.4%
<b>65-74</b>	1,110	525	305	27.5%
<b>75+</b>	125	60	20	16.0%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	1.4%
Secondary (high) school diploma or equivalency certificate	10.7%
Apprenticeship or trades certificate or diploma	1.3%
College, CEGEP or other non-university certificate or diploma	39.1%
University certificate or diploma below bachelor level	4.4%
University certificate, diploma or degree at bachelor level or above	43.0%

### Gender (Toronto, 2016)

Female	47.9%
Male	52.1%

### Interior designers and interior decorators (5242)

Interior designers and interior decorators conceptualize and produce aesthetic, functional and safe designs for interior spaces in residential, commercial, cultural, institutional and industrial buildings. They are employed by architectural and interior design firms, retail establishments, construction companies, hospitals, airlines, hotel and restaurant chains, and other establishments, or they may be self-employed.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>This group performs some or all of the following duties:</li> </ul>	<ul style="list-style-type: none"> <li>Interior designers</li> </ul>

- Consult with clients to determine needs, preferences, safety requirements and purpose of space
- Develop detailed plans and 3-D models showing arrangement of walls, dividers, displays, lighting and other fixtures using computer-assisted design (CAD) software and graphics software
- Develop plans, elevations, cross sections and detailed drawings, and advise on selection of colours, finishes and materials, floor and wall coverings, window treatments, interior and exterior lighting, furniture and other items, taking into account ergonomic and occupational health standards
- Estimate costs and materials required and may advise on leasing, real estate and marketing
- Prepare plans and specifications for the final interior designs in accordance with current practices and codes
- Work in a multidisciplinary environment
- May direct site work crews and subcontractors.
- Interior designers are experts in the area of interior architecture, construction materials and building codes. They may specialize in designing interiors for residential, commercial, institutional, cultural and industrial buildings and for aircraft, ships or trains, trade shows and exhibitions. Interior decorators may specialize in decorating residential or commercial interior spaces, home staging, colour consulting and home organizing.
- A university degree or college diploma in interior design is usually required.
- The National Council for Interior Design Qualification (NCIDQ) examination may be required after six years of combined study and experience.
- Certification by a provincial institute or association is required to use protected titles related to interior designers in all provinces except Prince Edward Island.
- Interior decorators
- A college certificate or diploma in interior decoration is usually required.
- Membership in the Canadian Decorators' Association is available to qualified decorators.

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## Job Titles

Illustrative Titles	Other Titles
aircraft interior designer	aircraft interior designer
interior decorator	building space planner
interior design technician	business aircraft interior designer

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interior designer  
kitchen designer  
office space planner  
retail space planner

certified interior designer  
colour consultant - home decorating  
decorating consultant  
designer - interior design  
green design consultant - interior design  
home decorating consultant  
home decorator  
home organizer  
home stager  
home staging consultant  
interior decorating consultant  
interior decorator  
interior design consultant  
interior design project manager  
interior design technician  
interior designer  
interior designer assistant  
interior space designer  
kitchen designer  
licensed interior designer  
office space planner  
registered interior designer  
retail space planner  
space management consultant

### Inclusions

- home staging consultant
- space management consultant

### Exclusions

- Graphic designers and illustrators (See 5241 Graphic designers and illustrators)
- Industrial designers (See 2252 Industrial designers)
- Lighting designers (See 5243 Theatre, fashion, exhibit and other creative designers)
- Painters and decorators (except interior decorators) (See 7294 Painters and decorators (except interior decorators))
- Theatre, fashion, exhibit and other creative designers (See 5243 Theatre, fashion, exhibit and other creative designers)

### Additional Information

- None

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	25,635	10,885	6,660	26.0%
Employee	15,380	6,240	3,735	24.3%
Self-Employed	10,260	4,640	2,925	28.5%
% Self-Employed	40.0%	42.6%	43.9%	
Average Income	36,173	37,908	40,002	110.6%
Median Income	29,902	30,662	31,880	106.6%

### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	1,485	640	370	24.9%
15-19	90	40	25	27.8%
20-24	1,390	600	350	25.2%
<b>25-64</b>	22,975	9,645	5,980	26.0%
25-34	6,615	2,680	1,770	26.8%
25-29	3,230	1,330	905	28.0%
30-34	3,385	1,350	870	25.7%
35-44	5,800	2,265	1,420	24.5%
45-54	6,265	2,790	1,735	27.7%
55-64	4,295	1,910	1,050	24.4%
<b>65-74</b>	1,035	515	270	26.1%
<b>75+</b>	150	90	40	26.7%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	3.4%
Secondary (high) school diploma or equivalency certificate	11.0%
Apprenticeship or trades certificate or diploma	2.2%
College, CEGEP or other non-university certificate or diploma	31.2%

University certificate or diploma below bachelor level	4.7%
University certificate, diploma or degree at bachelor level or above	47.6%

### Gender (Toronto, 2016)

Female	76.7%
Male	23.3%

## Theatre, fashion, exhibit and other creative designers (5243)

Theatre, fashion, exhibit and other creative designers conceptualize and produce designs for film, television, theatre and video productions, garments and textiles, displays and exhibits, and for other creative items such as jewellery and trophies. Theatre designers are employed by performing arts and broadcasting companies and by festivals; fashion designers are employed by clothing and textile companies or may be self-employed; and exhibit designers are employed by museums and retail establishments. Other creative designers in this unit group are employed by manufacturing establishments or may be self-employed.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>• This group performs some or all of the following duties:</li> <li>• Theatre designers</li> <li>• Design and create settings, scenic environments, properties, costumes and lighting for theatre, film and video productions, operas and ballets.</li> <li>• Fashion designers</li> <li>• Design and create clothing and accessories for men, women and children.</li> <li>• Exhibit designers</li> <li>• Plan and develop permanent and temporary or moveable exhibits and displays for museum exhibitions, trade shows, conventions, retail spaces and other exhibitions.</li> <li>• Theatre designers may specialize in costume, lighting or set design; fashion designers may specialize in men's, women's or children's apparel or in</li> </ul>	<ul style="list-style-type: none"> <li>• This group performs some or all of the following duties:</li> <li>• Theatre designers</li> <li>• Design and create settings, scenic environments, properties, costumes and lighting for theatre, film and video productions, operas and ballets.</li> <li>• Fashion designers</li> <li>• Design and create clothing and accessories for men, women and children.</li> <li>• Exhibit designers</li> <li>• Plan and develop permanent and temporary or moveable exhibits and displays for museum exhibitions, trade shows, conventions, retail spaces and other exhibitions.</li> <li>• Theatre designers may specialize in costume,</li> </ul>

different lines such as sportswear, footwear or formal wear.

lighting or set design; fashion designers may specialize in men's, women's or children's apparel or in different lines such as sportswear, footwear or formal wear.

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## Job Titles

Illustrative Titles	Other Titles
clothing designer	assistant costume designer
costume designer	clothing designer
couturier - haute couture	costume designer
display designer	costume designer - exhibits and theatre
fabric designer	couturier - haute couture
fashion designer	crest designer
fur designer	designer - theatre
jewellery designer	display design supervisor
lighting designer	display designer
museum exhibit designer	display designer - museums and art galleries
shoe designer	display designers supervisor
trophy designer	embroidery designer
window display designer	exhibit and display designer
	exhibit designer
	exhibit designer - museums and art galleries
	exhibit designers supervisor
	exhibition designer - museums and art galleries
	fabric designer
	facilities designer
	fashion co-ordinator
	fashion designer
	fashion goods co-ordinator
	fashion goods exhibit co-ordinator
	fashion stylist
	fashion wear designer
	fishing lure designer
	food stylist
	fur designer
	garment designer
	glove designer
	handbag designer
	hat designer
	heraldist
	jacket designer
	jewellery designer
	lighting designer

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lighting designer - exhibits  
luggage designer  
luggage stylist  
memorial designer  
museum designer  
museum exhibit designer  
novelties stylist  
pottery designer  
rug designer  
scene designer  
scene designer assistant  
set decorator - theatre and motion pictures  
set designer - theatre  
shoe designer  
show and demonstration designer  
sound designer  
stage scenery designer  
store display designer  
swimming pool designer  
textile designer  
theatre designer  
tile designer  
toy designer - arts and crafts  
trophy designer  
visual display stylist  
visual merchandiser  
window display designer  
women's fashion designer

### Inclusions

- exhibit designer - museums and art galleries
- facilities designer
- fashion co-ordinator
- fashion stylist
- visual merchandiser

### Exclusions

- Diorama makers - museums and galleries (See 5212 Technical occupations related to museums and art galleries)
- Graphic designers and illustrators (See 5241 Graphic designers and illustrators)
- Industrial designers (See 2252 Industrial designers)
- Interior designers and interior decorators (See 5242 Interior designers and interior decorators)
- Patternmakers - textile, leather and fur products (See 5245 Patternmakers - textile, leather and fur products)

- Tailors, dressmakers, furriers and milliners (See 6342 Tailors, dressmakers, furriers and milliners)

### Additional Information

- Designers may advance to supervisory and management positions.

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	14,790	5,485	3,885	26.3%
Employee	9,780	3,465	2,460	25.2%
Self-Employed	5,010	2,020	1,425	28.4%
% Self-Employed	33.9%	36.8%	36.7%	
Average Income	38,715	37,246	38,534	99.5%
Median Income	29,880	27,703	29,837	99.9%

### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	1,365	620	420	30.8%
15-19	115	60	30	26.1%
20-24	1,250	560	395	31.6%
<b>25-64</b>	12,880	4,630	3,345	26.0%
25-34	4,520	1,670	1,310	29.0%
25-29	2,310	835	655	28.4%
30-34	2,210	830	655	29.6%
35-44	3,690	1,185	860	23.3%
45-54	2,855	1,065	725	25.4%
55-64	1,815	715	440	24.2%
<b>65-74</b>	455	175	75	16.5%
<b>75+</b>	85	60	35	41.2%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
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No certificate, diploma or degree	2.6%
Secondary (high) school diploma or equivalency certificate	18.1%
Apprenticeship or trades certificate or diploma	2.3%
College, CEGEP or other non-university certificate or diploma	32.8%
University certificate or diploma below bachelor level	4.3%
University certificate, diploma or degree at bachelor level or above	40.0%

### Gender (Toronto, 2016)

Female	70.5%
Male	29.5%

### Patternmakers - textile, leather and fur products (5245)

Patternmakers in textile, leather and fur products create master patterns for the production of garments, footwear and other textile, leather or fur products. They are employed by pattern manufacturers, textile, leather or fur products manufacturers, or they may be self-employed.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>• This group performs some or all of the following duties:</li> <li>• Examine sketches, samples of articles and specifications of designs to determine number, size and shape of pattern parts and assess the amount of cloth required to make a product</li> <li>• Draw, lay out and cut master patterns of products</li> <li>• Outline parts of patterns on paper and mark patterns to indicate details such as the placement of pockets and pleats on garments, decorative stitching on shoe parts or eyelets on canvas products</li> <li>• Create pattern size variations from master patterns using computer or drafting instruments, or forward patterns to computer operator to create pattern size variations</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of secondary school is required.</li> <li>• College courses in design and patternmaking or One to two years of on-the-job training are required.</li> <li>• Courses in computer-assisted patternmaking may be required.</li> </ul>

- Lay out master patterns on fabric and cut sample patterns
- Mark size, identification, style and sewing instructions on sample patterns.

## Job Titles

Illustrative Titles	Other Titles
dress patternmaker	canvas goods maker
embroidery patternmaker	canvas goods pattern designer and patternmaker
fur garment patternmaker	canvas layer-out - textile products
garment patternmaker	canvas pattern designer
leather products patternmaker	canvas patternmaker
shoe patternmaker	cartoon embroidery enlarger
textile products patternmaker	digitizer operator - textile, leather and fur products
	doper - fabric products
	doper and marker
	dress patternmaker
	embroidery patternmaker
	fur garment patternmaker
	fur patternmaker
	fur products patternmaker
	garment patternmaker
	last-pattern grader
	layer-out and patternmaker
	lay-out and patternmaker
	leather products patternmaker
	men's and women's wear patternmaker
	modifier and lay-out marker
	modifier and marker
	pattern designer and patternmaker - textile, leather and fur products
	pattern grader
	pattern marker
	pattern marker - fabric products
	pattern modifier
	pattern modifier - textile, leather and fur products
	patternmaker - computer assisted
	patternmaker - textile products
	patternmaker - textile, leather and fur products
	sail lay-out and patternmaker
	sail maker
	shoe patternmaker
	shoe-last patternmaker
	textile identification mark remover
	textile mark remover

textile marker-down  
textile products patternmaker  
tracer-patternmaker

### Inclusions

- None

### Exclusions

- Supervisors, textile, fabric, fur and leather products processing and manufacturing (See 9217 Supervisors, textile, fabric, fur and leather products processing and manufacturing)

### Additional Information

- Progression to supervisory positions is possible with experience.

### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	1,045	255	160	15.3%
Employee	800	160	125	15.6%
Self-Employed	240	100	35	14.6%
% Self-Employed	23.0%	39.2%	21.9%	
Average Income	42,875	35,609	41,017	95.7%
Median Income	38,947	23,950	37,556	96.4%

### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	45	15	15	33.3%
15-19	10	0	0	0.0%
20-24	35	15	10	28.6%
<b>25-64</b>	935	205	125	13.4%
25-34	120	25	25	20.8%
25-29	55	20	20	36.4%
30-34	65	0	10	15.4%
35-44	210	50	10	4.8%
45-54	285	45	30	10.5%

55-64	315	85	60	19.0%
<b>65-74</b>	65	35	25	38.5%
<b>75+</b>	0	0	0	#N/A

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	11.1%
Secondary (high) school diploma or equivalency certificate	22.2%
Apprenticeship or trades certificate or diploma	11.1%
College, CEGEP or other non-university certificate or diploma	40.7%
University certificate or diploma below bachelor level	7.4%
University certificate, diploma or degree at bachelor level or above	11.1%

### Gender (Toronto, 2016)

Female	57.1%
Male	42.9%

## Supervisors, textile, fabric, fur and leather products processing and manufacturing (9217)

Supervisors in textile, fabric, fur and leather products processing and manufacturing supervise and co-ordinate the activities of workers engaged in textile, fabric, fur and leather products processing and manufacturing. They are employed by textile manufacturing companies, tanneries and other manufacturers of fabric, fur and leather products.

### Job Duties and Requirements

Job Duties	Employment Requirements
<ul style="list-style-type: none"> <li>This group performs some or all of the following duties:</li> <li>Supervise, co-ordinate and schedule the activities of production workers who operate machines to process natural, synthetic and hybrid textile fibre, yarn and thread; bleach, dye and finish textiles; operate manufacturing machines to cut, stitch and produce</li> </ul>	<ul style="list-style-type: none"> <li>Completion of secondary school is usually required.</li> <li>Post-secondary education in textile technology or a related field may be required for some positions in this group.</li> <li>Several years of experience as a worker in the unit group</li> </ul>

- fabric, fur or leather garments and other products; and inspect textile products
- Establish methods to meet work schedules and co-ordinate work activities with other departments
  - Resolve work problems and recommend measures to improve productivity and product quality
  - Requisition materials and supplies
  - Train staff in job duties, safety procedures and company policies
  - Recommend personnel actions such as hirings and promotions
  - Prepare production and other reports
  - May set up machines and equipment.

- being supervised are usually required.
- Experience may be required in a specific process, or with a specific product or type of equipment.

## Job Titles

Illustrative Titles	Other Titles
boot and shoe foreman/woman	alterations supervisor - clothing manufacturing
canvas products manufacturing foreman/woman	assemblers supervisor - fabric, fur and leather products manufacturing
dye room supervisor	beam department foreman/woman - hide and pelt processing
embroidery supervisor - fabric products	bleaching foreman/woman - textiles
fabric-cutting department foreman/woman	boot and shoe foreman/woman
finishing supervisor - textiles	bootmakers and shoemakers foreman/woman
foreman/woman - textile processing	bootmakers foreman/woman
fur dressing foreman/woman	canvas products manufacturing foreman/woman
hat and cap makers foreman/woman	card room supervisor - textiles
knitting supervisor	clothing manufacturing foreman/woman
sample room foreman/woman - leather products	cutter supervisor - fabric, fur and leather products manufacturing
sewing machine operators supervisor	cutting department foreman/woman - fabric, fur and leather products manufacturing
stitching department supervisor	cutting room foreman/woman - fabric, fur and leather products manufacturing
tannery foreman/woman	dress repairs foreman/woman - clothing manufacturing
	dressmakers supervisor
	dressmaking department foreman/woman
	dressmaking department supervisor
	dye department foreman/woman - textiles
	dye foreman/woman - textiles
	dye room foreman/woman - textile processing
	dye room supervisor

dye room supervisor - textiles  
dye room supervisor - textiles processing  
dyehouse foreman/woman - hide and pelt  
processing  
dyehouse foreman/woman - textiles  
dyehouse supervisor - textile processing  
dyeing supervisor - textiles  
embroidery supervisor - fabric products  
fabric products embroidery supervisor  
fabric-cutting department foreman/woman  
felt hat finishing room foreman/woman  
finishing department foreman/woman - fabric, fur and  
leather products manufacturing  
finishing department foreman/woman - textile  
processing  
finishing department supervisor - textile processing  
finishing supervisor - textiles  
footwear finishing foreman/woman  
footwear manufacturing foreman/woman  
foreman/woman - textile processing  
fur dressing foreman/woman  
fur dressing foreman/woman - hide and pelt  
processing  
fur dressing supervisor  
fur hatmaking department foreman/woman  
fur products manufacturing foreman/woman  
furriers foreman/woman  
furriers supervisor  
garment manufacturing foreman/woman  
glove makers foreman/woman  
glove manufacturing foreman/woman  
handbag manufacturing foreman/woman  
hat and cap makers foreman/woman  
hat dyer supervisor  
hat trimming department foreman/woman  
hide tanning supervisor  
hide-house foreman/woman - hide and pelt  
processing  
hosiery foreman/woman  
inspection foreman/woman - textile processing  
inspector, grader, sampler and tester  
foreman/woman - fabric, fur and leather products  
manufacturing  
knitting foreman/woman  
knitting foreman/woman - textile processing  
knitting supervisor

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knitting supervisor - textile processing  
latex carpet-backing department foreman/woman  
layout and marking foreman/woman - fabric, fur and  
leather products manufacturing  
leather finishing foreman/woman - hide and pelt  
processing  
leather products manufacturing foreman/woman  
luggage assembly foreman/woman - fabric, fur and  
leather products manufacturing  
millinery foreman/woman - fabric, fur and leather  
products manufacturing  
preparation department foreman/woman - textiles  
production foreman/woman - fabric, fur and leather  
products manufacturing  
production foreman/woman - fur products  
manufacturing  
quality control foreman/woman - textiles  
quilting foreman/woman - textile processing  
sample room foreman/woman - fabric, fur and  
leather products manufacturing  
sample room foreman/woman - leather products  
sewing machine operator supervisor - fabric, fur and  
leather products manufacturing  
sewing machine operators foreman/woman - fabric,  
fur and leather products manufacturing  
sewing machine operators supervisor  
spinning room foreman/woman - textiles  
spinning supervisor - textiles  
spun yarn preparation foreman/woman  
spun yarn preparation supervisor - textile processing  
stitchers foreman/woman - fabric, fur and leather  
products manufacturing  
stitching department foreman/woman - fabric, fur and  
leather products manufacturing  
stitching department supervisor  
stitching department supervisor - fabric, fur and  
leather products manufacturing  
suitmaking foreman/woman  
tannery foreman/woman  
tannery foreman/woman - hide and pelt processing  
tannery supervisor - hide and pelt processing  
tanyard foreman/woman - hide and pelt processing  
textile processing foreman/woman  
textile processing supervisor  
tufted-carpet weaver supervisor  
tufting supervisor - textiles

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twisting foreman/woman - textiles  
upholsterers foreman/woman - fabric, fur and leather products manufacturing  
upholstery-cutting and sewing foreman/woman  
weave room foreman/woman - textile processing  
weave room supervisor  
weave room supervisor - textile processing  
weaving foreman/woman  
weaving inspector foreman/woman - textile processing  
weaving room supervisor - textile processing  
weaving room supervisor - textiles  
weaving supervisor  
wool sorter and grader foreman/woman - textile processing  
wool sorting and grading foreman/woman  
woven fabric inspection foreman/woman - textile processing  
yarn preparation supervisor - textiles

### Inclusions

- None

### Exclusions

- Machine operators and related workers in textile, fabric, fur and leather products processing and manufacturing (See 944 Machine operators and related workers in textile, fabric, fur and leather products processing and manufacturing)
- Master dyers and textile colour technologists (See 2211 Chemical technologists and technicians)
- Tailors, dressmakers, furriers and milliners (See 6342 Tailors, dressmakers, furriers and milliners)
- Technologists and technicians in textile manufacturing (See 2233 Industrial engineering and manufacturing technologists and technicians)
- Textile machinery mechanics (See 7311 Construction millwrights and industrial mechanics)

### Additional Information

- There is some mobility among supervisory positions in this group.
- Progression to managerial positions is possible with experience.



### Total Workforce (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
Total Workers	1,875	640	340	18.1%
Employee	1,750	605	320	18.3%
Self-Employed	130	35	25	19.2%
% Self-Employed	6.9%	5.5%	7.4%	
Average Income	43,709	44,196	40,597	92.9%
Median Income	41,143	41,708	38,421	93.4%

### Workforce by Age (2016)

	Canada	Ontario	Toronto	Toronto % of Canada
<b>15-24</b>	35	15	10	28.6%
15-19	0	0	0	#N/A
20-24	35	15	0	0.0%
<b>25-64</b>	1,740	595	315	18.1%
25-34	230	95	40	17.4%
25-29	110	40	25	22.7%
30-34	120	55	20	16.7%
35-44	345	150	70	20.3%
45-54	610	185	110	18.0%
55-64	550	165	95	17.3%
<b>65-74</b>	85	25	15	17.6%
<b>75+</b>	15	0	0	0.0%

### Educational Attainment (Toronto, 2016)

Highest Education	Share
No certificate, diploma or degree	21.7%
Secondary (high) school diploma or equivalency certificate	40.6%
Apprenticeship or trades certificate or diploma	2.9%
College, CEGEP or other non-university certificate or diploma	14.5%

University certificate or diploma below bachelor level	2.9%
University certificate, diploma or degree at bachelor level or above	17.4%

**Gender (Toronto, 2016)**

Female	67.1%
Male	32.9%

# Industry Profiles

## Architectural services (541310)

This Canadian industry comprises establishments primarily engaged in planning and designing the construction of residential, institutional, leisure, commercial and industrial buildings and other structures by applying knowledge of design, construction procedures, zoning regulations, building codes and building materials.

### Industry Titles

Illustrative Examples	Other Examples
<ul style="list-style-type: none"><li>• None</li></ul>	<ul style="list-style-type: none"><li>• architects (except landscape), offices of</li><li>• architectural consultants (except landscape)</li><li>• architectural design services and advice</li><li>• buildings and structures, architectural design services (except landscape)</li></ul>

### Inclusions

- None

### Exclusions

- design and construction of buildings, highways or other structures (See 23 Construction)
- design-builders (See 23 Construction)
- planning and designing landscapes (See 541320 Landscape architectural services)
- providing construction management services - classified by type of construction (See 23 Construction)

### Industry Size (Canadian Business Counts, 2020; total employment estimated)

		Canada	Ontario	Toronto	Toronto % of Canada
Estimated Total Employment		20,147	7,941	5,777	28.7%
Without Employees		4,350	1,713	1,188	27.3%
With Employees		2,895	1,115	703	24.3%
Number of Firms By Employee Count	1-4	1,695	689	447	26.4%
	5-9	568	196	109	19.2%
	10-19	344	130	84	24.4%
	20-49	212	70	36	17.0%
	50-99	50	17	14	28.0%
	100-199	19	9	9	47.4%
	200-499	6	3	3	50.0%
	500+	1	1	1	100.0%

### Industry Size by Year (Canadian Business Counts, 2015-2020; total employment estimated)

	Firm Count				Estimated Total Employment			
	Canada	Ontario	Toronto	Toronto % of Canada	Canada	Ontario	Toronto	Toronto % of Canada
2015	1,115	936	599	53.7%	7,941	5,523	3,796	47.8%
2016	2,602	984	637	24.5%	15,785	5,894	4,051	25.7%
2017	2,670	1,031	656	24.6%	17,642	7,005	4,967	28.2%
2018	2,714	1,046	659	24.3%	18,139	6,854	4,926	27.2%
2019	2,854	1,122	709	24.8%	19,262	7,544	5,435	28.2%
2020	2,895	1,115	703	24.3%	20,147	7,941	5,777	28.7%

## Landscape architectural services (541320)

This Canadian industry comprises establishments primarily engaged in planning, designing and administering the development of land areas for projects such as parks and other recreational areas, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial and residential areas by applying knowledge of land characteristics, location of buildings and structures, use of land areas, and design of landscape projects.

### Industry Titles

Illustrative Examples	Other Examples
<ul style="list-style-type: none"> <li>city, town or urban planning services (except engineers)</li> <li>garden planning services</li> <li>land use planning services</li> <li>offices of landscape architects</li> <li>recreational area planning and designing services (e.g., ski, golf course, waterparks)</li> </ul>	<ul style="list-style-type: none"> <li>industrial development planning service (i.e., urban planning)</li> <li>landscape planning services</li> <li>waterpark designing and planning</li> </ul>

### Inclusions

- None

### Exclusions

- city, town or urban planning engineers (See 541330 Engineering services)
- designing, installing and maintaining the materials specified in the landscaping design as part of an integrated service (See 561730 Landscaping services)
- operating retail nursery and garden centres that also provide landscape consulting and design services (See 444220 Nursery stores and garden centres (US))

### Industry Size (Canadian Business Counts, 2020; total employment estimated)

		Canada	Ontario	Toronto	Toronto % of Canada
Estimated Total Employment		3,430	1,659	988	28.8%
Number of Firms	Without Employees	1,272	547	266	20.9%
	With Employees	803	362	163	20.3%
By Employee Count	1-4	533	243	98	18.4%
	5-9	159	63	30	18.9%
	10-19	74	37	22	29.7%
	20-49	30	14	9	30.0%

50-99	5	4	3	60.0%
100-199	2	1	1	50.0%
200-499	0	0	0	N/A
500+	0	0	0	N/A

### Industry Size by Year (Canadian Business Counts, 2015-2020; total employment estimated)

	Firm Count				Estimated Total Employment			
	Canada	Ontario	Toronto	Toronto % of Canada	Canada	Ontario	Toronto	Toronto % of Canada
2015	362	343	153	42.3%	1,659	1,334	782	47.1%
2016	801	340	158	19.7%	3,146	1,411	807	25.7%
2017	733	329	153	20.9%	2,918	1,394	811	27.8%
2018	729	325	143	19.6%	3,192	1,671	953	29.8%
2019	776	358	158	20.4%	3,424	1,728	1,001	29.2%
2020	803	362	163	20.3%	3,430	1,659	988	28.8%

### Interior design services (541410)

This Canadian industry comprises establishments primarily engaged in planning, designing and administering projects in interior spaces to meet the physical and aesthetic needs of people, taking into consideration building codes, health and safety regulations, traffic patterns and floor planning, mechanical and electrical needs, and interior fittings and furniture. Interior designers and interior design consultants work in areas such as hospitality design, health care design, institutional design, commercial and corporate design and residential design.

### Industry Titles

Illustrative Examples	Other Examples
<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>decoration services for special events</li> </ul>

- designers, interior, offices of
- home staging services
- house staging services
- interior decorating consulting service
- interior decorators consulting service (except painters)
- interior design consulting services
- interior design services
- interior lighting consultants
- layouts-office, factory (designers, interior)

### Inclusions

- interior decorating consultants engaged exclusively in providing aesthetic services associated with interior spaces

### Exclusions

- painting contractors (See 238320 Painting and wall covering contractors)

### Industry Size (Canadian Business Counts, 2020; total employment estimated)

		Canada	Ontario	Toronto	Toronto % of Canada
Estimated Total Employment		5,720	3,101	2,286	40.0%
Without Employees		5,632	2,624	1,709	30.3%
With Employees		1,950	945	671	34.4%
Number of Firms	1-4	1,505	719	513	34.1%
	5-9	293	146	101	34.5%
	10-19	111	50	32	28.8%
	20-49	31	21	17	54.8%
	50-99	10	9	8	80.0%
	100-199	0	0	0	N/A
	200-499	0	0	0	N/A
	500+	0	0	0	N/A

### Industry Size by Year (Canadian Business Counts, 2015-2020; total employment estimated)

	Firm Count	Estimated Total Employment
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	Canada	Ontario	Toronto	Toronto % of Canada	Canada	Ontario	Toronto	Toronto % of Canada
2015	945	735	531	56.2%	3,101	2,148	1,607	51.8%
2016	1,758	812	579	32.9%	5,002	2,396	1,740	34.8%
2017	1,821	870	627	34.4%	5,122	2,649	2,043	39.9%
2018	1,892	909	652	34.5%	5,344	2,790	2,129	39.8%
2019	1,936	925	666	34.4%	5,522	2,868	2,222	40.2%
2020	1,950	945	671	34.4%	5,720	3,101	2,286	40.0%

## Industrial design services (541420)

This Canadian industry comprises establishments primarily engaged in creating and developing designs and specifications that optimize the function, value and appearance of products.

### Industry Titles

Illustrative Examples	Other Examples
<ul style="list-style-type: none"> <li>• automobile industrial design services</li> <li>• furniture design services</li> <li>• industrial design consulting services</li> <li>• modelling services (for scale models)</li> <li>• package design (industrial) services</li> </ul>	<ul style="list-style-type: none"> <li>• designing electronic devices</li> <li>• furniture designers</li> <li>• industrial design services</li> <li>• industrial tool design services</li> <li>• restaurant equipment design services</li> </ul>

### Inclusions

- determination of materials, construction, mechanisms, shape, colour, and surface finishes of the product, taking into consideration human needs, safety, market appeal and efficiency in production, distribution, use and maintenance

### Exclusions



- applying principles of engineering in the design, development and utilization of machines, materials, instruments, structures, processes and systems (See 541330 Engineering services)
- designing clothing, shoes and jewellery (See 541490 Other specialized design services)
- designing, subcontracting the manufacturing and marketing of products (See 31-33 Manufacturing)

### Industry Size (Canadian Business Counts, 2020; total employment estimated)

		Canada	Ontario	Toronto	Toronto % of Canada
Estimated Total Employment		1,229	396	219	17.8%
Without Employees		1,051	434	257	24.5%
With Employees		506	199	118	23.3%
Number of Firms By Employee Count	1-4	417	175	104	24.9%
	5-9	54	15	9	16.7%
	10-19	27	7	5	18.5%
	20-49	8	2	0	0.0%
	50-99	0	0	0	N/A
	100-199	0	0	0	N/A
	200-499	0	0	0	N/A
	500+	0	0	0	N/A

### Industry Size by Year (Canadian Business Counts, 2015-2020; total employment estimated)

	Firm Count				Estimated Total Employment			
	Canada	Ontario	Toronto	Toronto % of Canada	Canada	Ontario	Toronto	Toronto % of Canada
2015	199	195	110	55.3%	396	506	260	65.6%
2016	536	198	108	20.1%	1,365	549	262	19.2%
2017	529	207	114	21.6%	1,606	736	371	23.1%

2018	528	215	124	23.5%	1,574	767	385	24.5%
2019	527	206	120	22.8%	1,429	582	351	24.6%
2020	506	199	118	23.3%	1,229	396	219	17.8%

## Graphic design services (541430)

This Canadian industry comprises establishments primarily engaged in planning, designing and managing the production of visual communication, so as to convey specific messages or concepts, clarify complex information or project visual identities.

### Industry Titles

Illustrative Examples	Other Examples
<ul style="list-style-type: none"> <li>commercial art services</li> <li>graphic design consulting services</li> <li>independent graphic designers</li> <li>silk screen design service (serigraphy)</li> <li>Web page layout design (without programming)</li> </ul>	<ul style="list-style-type: none"> <li>art studios, commercial</li> <li>commercial artists, independent</li> <li>corporate logo consulting services</li> <li>graphic arts and related design</li> <li>illustrators, commercial</li> <li>independent artists, medical illustration</li> <li>independent graphic artists</li> <li>visual communication, design consultants</li> </ul>

### Inclusions

- commercial artists engaged exclusively in generating drawings and illustrations requiring technical accuracy or interpretative skills
- designing the visual layout of printed materials, web pages, packaging labels and graphics, advertising, signage systems, logos and corporate identification

### Exclusions

- creating and placing advertising campaigns in media (See 541810 Advertising agencies)
- creating cartoons and visual art (See 711511 Independent visual artists and artisans (CAN))
- creating or placing public display advertising material (See 541850 Display advertising)
- producing animated films (See 512110 Motion picture and video production (US))

- providing advice concerning marketing strategies (See 541611 Administrative management and general management consulting services (US))
  - web page development (See 541514 Computer systems design and related services (except video game design and development) (CAN))
-

### Industry Size (Canadian Business Counts, 2020; total employment estimated)

		Canada	Ontario	Toronto	Toronto % of Canada
Estimated Total Employment		5,678	2,823	2,145	37.8%
Without Employees		7,940	3,506	2,227	28.0%
With Employees		1,993	896	590	29.6%
Number of Firms By Employee Count	1-4	1,587	721	465	29.3%
	5-9	265	105	71	26.8%
	10-19	100	48	35	35.0%
	20-49	35	17	14	40.0%
	50-99	3	2	2	66.7%
	100-199	2	2	2	100.0%
	200-499	1	1	1	100.0%
	500+	0	0	0	N/A

### Industry Size by Year (Canadian Business Counts, 2015-2020; total employment estimated)

	Firm Count				Estimated Total Employment			
	Canada	Ontario	Toronto	Toronto % of Canada	Canada	Ontario	Toronto	Toronto % of Canada
2015	896	948	646	72.1%	2,823	2,996	2,251	79.7%
2016	2,104	940	644	30.6%	6,386	3,147	2,323	36.4%
2017	2,086	949	657	31.5%	6,273	3,089	2,330	37.1%
2018	2,037	923	620	30.4%	5,830	2,787	1,956	33.5%
2019	2,023	909	615	30.4%	5,636	2,652	1,947	34.5%
2020	1,993	896	590	29.6%	5,678	2,823	2,145	37.8%

## Other specialized design services (541490)

This Canadian industry comprises establishments, not classified to any other Canadian industry, primarily engaged in providing professional design services.

### Industry Titles

Illustrative Examples	Other Examples
<ul style="list-style-type: none"> <li>• clothing design services</li> <li>• fashion design services</li> <li>• floats, design services</li> <li>• set design, theatrical (except independent)</li> <li>• shoe design services</li> <li>• textile design services</li> </ul>	<ul style="list-style-type: none"> <li>• consultants, fashion</li> <li>• costume design services (except independent designers)</li> <li>• fashion designer</li> <li>• fur design services</li> <li>• jewellery design services</li> <li>• museum exhibit design service</li> </ul>

### Inclusions

- None

### Exclusions

- independent theatrical set and costume designers (See 711512 Independent actors, comedians and performers (CAN))
- providing architectural design services (See 541310 Architectural services)
- providing computer systems design services (See 541514 Computer systems design and related services (except video game design and development) (CAN))
- providing engineering design services (See 541330 Engineering services)
- providing graphic design services (See 541430 Graphic design services)
- providing industrial design services (See 541420 Industrial design services)
- providing interior design services (See 541410 Interior design services)
- providing landscape architectural design services (See 541320 Landscape architectural services)

### Industry Size (Canadian Business Counts, 2020; total employment estimated)

	Canada	Ontario	Toronto	Toronto % of Canada	
Estimated Total Employment	1,671	961	843	50.4%	
Number of Firms	Without Employees	2,538	1,105	737	29.0%
	With Employees	495	198	134	27.1%
	By Size				
	1-4	414	164	111	26.8%
5-9	55	24	13	23.6%	

10-19	20	9	9	45.0%
20-49	4	0	0	0.0%
50-99	1	0	0	0.0%
100-199	0	0	0	N/A
200-499	0	0	0	N/A
500+	1	1	1	100.0%

**Industry Size by Year (Canadian Business Counts, 2015-2020; total employment estimated)**

	Firm Count				Estimated Total Employment			
	Canada	Ontario	Toronto	Toronto % of Canada	Canada	Ontario	Toronto	Toronto % of Canada
2015	198	181	131	66.2%	961	541	399	41.5%
2016	459	194	139	30.3%	1,440	569	414	28.7%
2017	464	206	147	31.7%	1,289	558	389	30.2%
2018	502	218	149	29.7%	1,451	526	358	24.6%
2019	508	211	148	29.1%	1,517	670	532	35.1%
2020	495	198	134	27.1%	1,671	961	843	50.4%

## Job Posting Criteria

All data from Burning Glass for jobs posted in the Toronto Metro (CMA).

Job postings were selected using two criteria:

1. The keywords “design” or “architect” were used in the job posting. (The search would find any words containing those, so designer, architecture, codesign, etc. would be found.)
2. The job post included a mention of skills that fell under the general skill cluster of “design” as defined by Burning Glass analysis of global job postings. Specific skill categories included in the cluster are identified below.
3. The job post included a mention of skills that fell under the general Architecture and Construction skill cluster and in the specific skill of Architectural Design

Job postings were collected for two time periods:

1. 2019 (any time that year) – considered as a measure of activity prior to Covid.
2. The previous 12 months (August 1, 2020 – July 31, 2021 for this data)

Job postings totals were also reported by industry and occupation. Both the Burning Glass occupations (derived from their analysis of global job postings) and NOC (Statistics Canada) occupations are reported.

## Skill Clusters

Burning Glass defines the “Design” skill cluster as having any of the following skills

- Animation and Game Design
- Art and Illustration
- Creative Design
- Digital Design
- Graphic and Visual Design
- Graphic and Visual Design Software
- Industrial Design
- Presentation Design
- User Interface and User Experience (UI/UX) Design

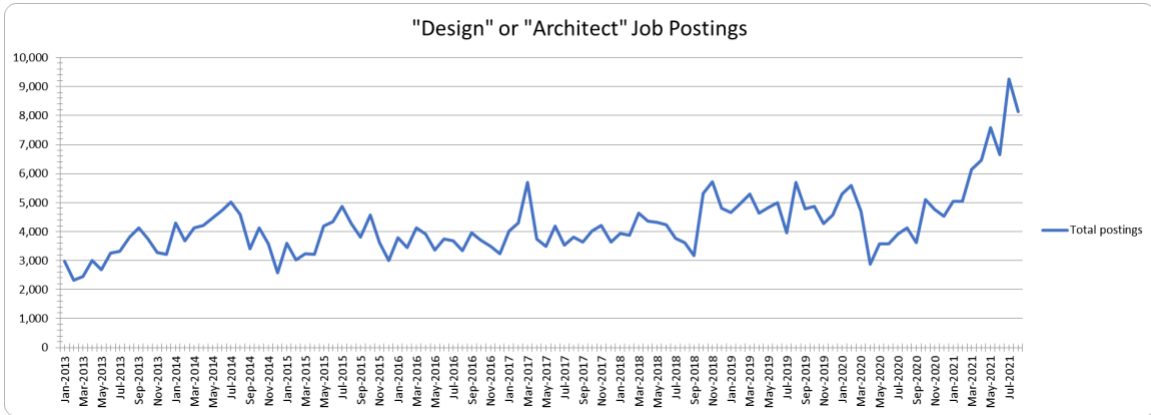
The specific skill cluster for “Architectural Design” in the Architecture and Construction general skill cluster has also been included.

## Job Postings 2013-2021

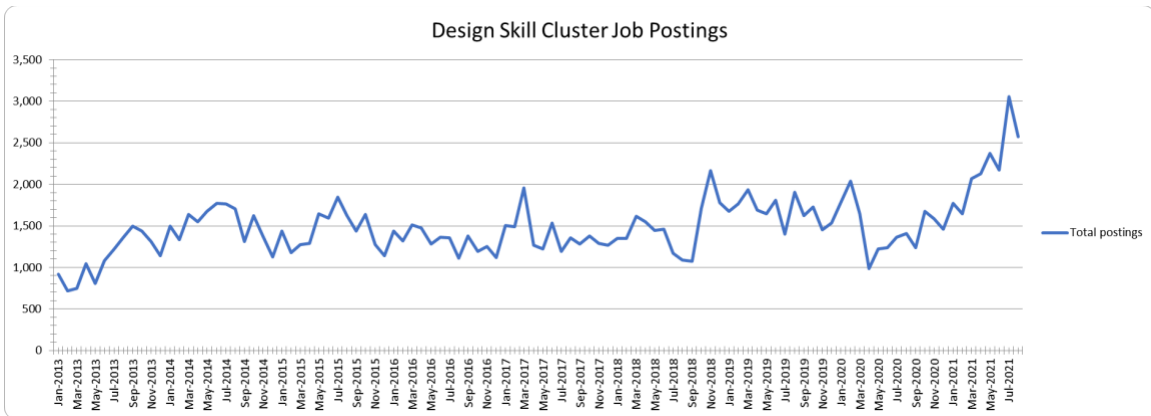
The charts below show the total number of job postings in Toronto by month from January 2013 to August 2021 for the criteria.

- For the keywords
  - The number of postings was consistently between 3,000 and 4,000 per month through 2018.
  - In 2019, it increased to around 5,000 per month.
  - Dropped back down in 2020 (Covid).

- Has risen steadily since May 2020.
- Is now at 8,000 to 9,000 job postings per month. July 2021 was 9,249 and August 2021 was 8,142.

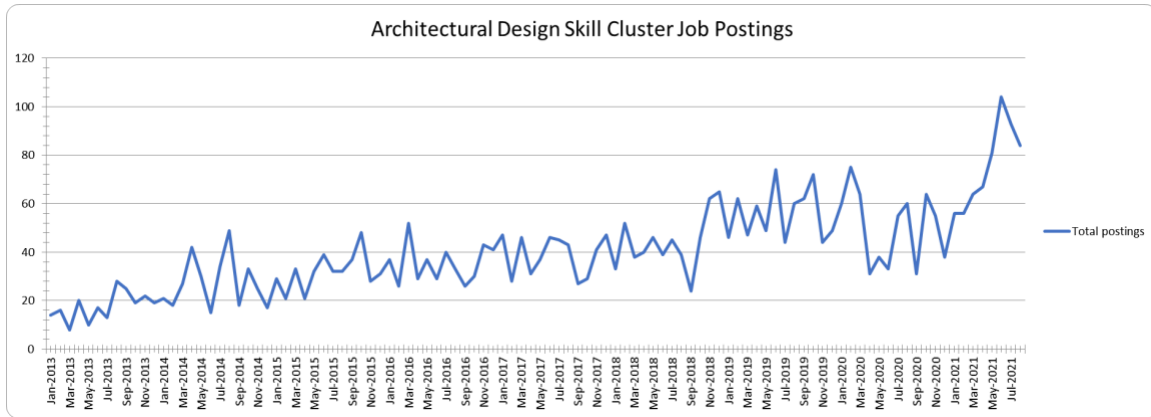


- For the Design Skill Cluster
  - The overall pattern is the same as for the keywords but at lower numbers
  - At around 1,300 per month 2013-2018
  - Up to 1,700 per month in 2019
  - Dropped back down in March 2020
  - Now at 3,053 in July 2021 and 2,569 in August 2021



- For the Architectural Design Skill Cluster
  - The overall pattern is the same as for the keywords but at lower numbers
  - Steadily increased over time.
  - At around 35 per month 2013-2018
  - Up to 55-70 per month in 2019
  - Dropped back down in March 2020
  - Now at 93 in July 2021 and 84 in August 2021 (over 100 in June 2021)





## By Industry and Occupation

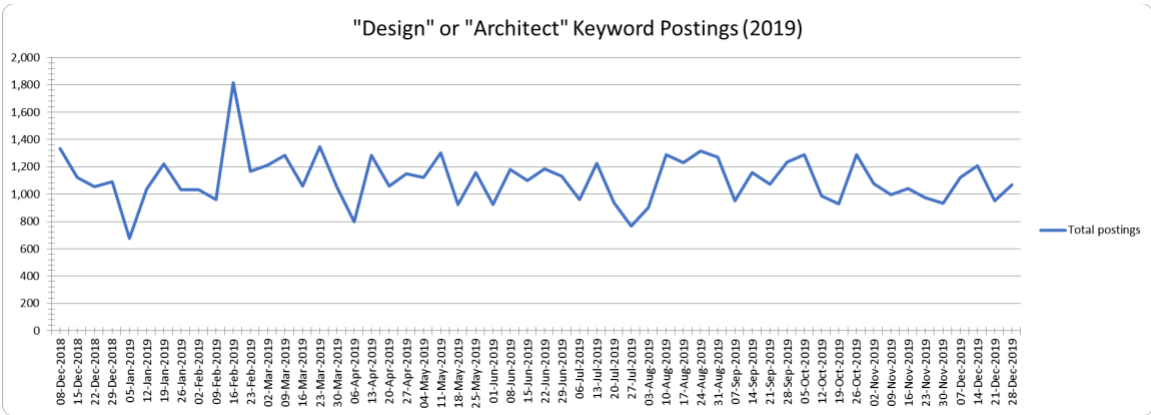
The job postings do not always contain enough information to determine the industry and/or occupation for that posting. As a result, the more specific information for each of the two time periods (2019 and previous 12 months) is based on a limited number of postings. The table below shows the total number of postings for the keyword and skill cluster, for each time period, and for industry and occupation (both Burning Glass and NOC). As shown in the table, roughly ½ of the job postings don't have a clearly identifiable industry; roughly nine in ten can't identify the Burning Glass occupation; and 19 in 20 don't have an NOC occupation code. Postings may still be categorized by industry sector or occupational family without having enough information to identify a specific industry or occupation. Not enough information is available to make any assumptions about those that can be specifically identified except to say that all results by industry and occupation must be interpreted as being “only for those that can be identified” and should not be taken as representative of the entire sector. The industry/occupation results from the Census presented with the profiles, while less timely, is more representative of the sector.

		Total Postings	Industry Identified	Burning Glass Occupation	NOC Occupation
<b>Design or Architect Keyword</b>	2019	57,508	27,382	5,542	3,438
	Previous 12 Months	68,290	32,836	6,159	3,785
<b>Design Skill Cluster</b>	2019	20,153	9,744	2,309	1,516
	Previous 12 Months	22,576	11,149	2,330	1,396
<b>Architectural Design Skill Cluster</b>	2019	668	322	78	49
	Previous 12 Months	769	449	109	38

Since the Skill Cluster results correlate strongly with the job posting keyword results but have lower total numbers and are divided into two groups, only the job posting keywords results are presented. The skill cluster data is available if interested or could provide more detailed analysis for specific skills if needed.

### 2019 Job Postings

The chart below shows the total number of job postings by week for 2019. The average number of new job postings per week was 1,107. The highest number of postings was 1,816 in the week of February 16 and the lowest was 676 in the week of January 5. Overall, during the year, the number of postings was generally between 1,000 and 1,200 and remained steady but flat throughout the year.



The table below shows the total number of job postings and the total share for 2019 by industry sector. The total number of postings only includes detailed industries in the top 200 while the share is the average of the quarterly share for all job postings. The difference, like for Manufacturing, is explained by postings in specific industries that don't make the top 200.

NAICS	Industry Sector	Total Postings	Share of All Postings
52	Finance and Insurance	8,374	23.1%
54	Professional, Scientific, and Technical Services	6,003	25.5%
51	Information	3,094	8.3%
31-33	Manufacturing	2,540	11.9%
44-45	Retail Trade	2,212	7.0%
56	Administrative and Support and Waste Management and Remediation Services	1,331	3.6%

<b>61</b>	Educational Services	1,269	3.4%
<b>62</b>	Health Care and Social Assistance	991	3.0%
<b>92</b>	Public Administration	844	2.3%
<b>23</b>	Construction	600	2.2%
<b>48-49</b>	Transportation and Warehousing	572	1.7%
<b>72</b>	Accommodation and Food Services	478	1.8%
<b>71</b>	Arts, Entertainment, and Recreation	432	1.1%
<b>53</b>	Real Estate and Rental and Leasing	429	1.9%
<b>81</b>	Other Services (except Public Administration)	342	1.1%
<b>22</b>	Utilities	256	0.9%
<b>42</b>	Wholesale Trade	240	0.6%
<b>21</b>	Mining, Quarrying, and Oil and Gas Extraction	53	0.3%
<b>55</b>	Management of Companies and Enterprises	34	0.2%
<b>11</b>	Agriculture, Forestry, Fishing and Hunting	n/a	0.1%

Most “Design” or “Architect” jobs are in Finance and Insurance or Professional, Scientific, and Technical Services with roughly one-in-ten jobs posted in each of Information, Manufacturing or Retail. The three tables below show by specific industry the total number of postings for the top industry sectors. Information, Manufacturing and Retail are combined and only show the top 20 industries. The Finance Industry is primarily employment in Banks and Insurance. Professional services are as expected with Architectural and Design Services. The others are more divided among Software/IT, Manufacturing (including automotive, aerospace and measurement devices), and Retail. Although Software and IT jobs have been excluded from the detailed analysis and scope of this report, they still encompass both design and architectural concepts and language in their job postings and so are counted here.

<b>NAICS</b>	<b>Industry (Finance and Insurance)</b>	<b>Job Postings</b>
<b>5221</b>	Depository Credit Intermediation	6,318
<b>5241</b>	Insurance Carriers	1,094
<b>5239</b>	Other Financial Investment Activities	326
<b>5231</b>	Securities and Commodity Contracts Intermediation and Brokerage	159
<b>5223</b>	Activities Related to Credit Intermediation	128
<b>5222</b>	Nondepository Credit Intermediation	122
<b>5242</b>	Agencies, Brokerages, and Other Insurance Related Activities	102
<b>5232</b>	Securities and Commodity Exchanges	86
<b>5259</b>	Other Investment Pools and Funds	25
<b>5251</b>	Insurance and Employee Benefit Funds	14

<b>NAICS</b>	<b>Industry (Professional, Scientific, and Technical Services)</b>	<b>Job Postings</b>
<b>5413</b>	Architectural, Engineering, and Related Services	1,921
<b>5416</b>	Management, Scientific, and Technical Consulting Services	1,355
<b>5415</b>	Computer Systems Design and Related Services	636
<b>5414</b>	Specialized Design Services	558
<b>5417</b>	Scientific Research and Development Services	485
<b>5412</b>	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	465
<b>5419</b>	Other Professional, Scientific, and Technical Services	336
<b>5418</b>	Advertising, Public Relations, and Related Services	186
<b>5411</b>	Legal Services	61

<b>NAICS</b>	<b>Industry (Information, Manufacturing, Retail Trade)</b>	<b>Job Postings</b>
5112	Software Publishers	843
3344	Semiconductor and Other Electronic Component Manufacturing	798
5171	Wired Telecommunications Carriers	688
5172	Wireless Telecommunications Carriers (except Satellite)	546
4481	Clothing Stores	446
4451	Grocery Stores	392
3363	Motor Vehicle Parts Manufacturing	328
4541	Electronic Shopping and Mail-Order Houses	300
3254	Pharmaceutical and Medicine Manufacturing	274
4411	Automobile Dealers	268
4521	Department Stores	249
5191	Other Information Services	213
5152	Cable and Other Subscription Programming	184
5121	Motion Picture and Video Industries	166
3364	Aerospace Product and Parts Manufacturing	137
5151	Radio and Television Broadcasting	127
5179	Other Telecommunications	120
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	106
5111	Newspaper, Periodical, Book, and Directory Publishers	100
4529	Other General Merchandise Stores	95

The table below shows the total number of job postings and the total share for 2019 by occupational family group. The total number of postings only includes detailed occupations in the top 200 while the share is the average of the quarterly share for all job postings. There is little difference between the two as the top 200 occupations account for almost all with either keyword.

<b>NOC Family</b>	<b>Family Desc</b>	<b>Total Postings</b>	<b>Share of All Postings</b>
<b>2</b>	Natural and applied sciences and related occupations	24,815	45.8%
<b>0</b>	Management occupations	10,362	20.1%
<b>1</b>	Business, finance and administration occupations	6,745	12.4%
<b>6</b>	Sales and service occupations	4,085	7.6%
<b>4</b>	Occupations in education, law and social, community and government services	2,643	4.9%
<b>5</b>	Occupations in art, culture, recreation and sport	2,355	4.4%
<b>7</b>	Trades, transport and equipment operators and related occupations	1,304	2.6%
<b>9</b>	Occupations in manufacturing and utilities	577	1.4%
<b>3</b>	Health occupations	226	0.6%
<b>8</b>	Natural resources, agriculture and related production occupations	160	0.4%

Most occupations are in Natural and Applied Sciences (nearly half) with Management and Business occupations comprising another third.

The four tables below show the specific occupations within the top three occupation families (Natural and Applied Science, Management, Business) and for all other occupation families. Only the most prevalent occupations (those with 100+) are shown for each. As with industry, many of the occupations are Software/IT related, but as with industry, the ubiquity of design and/or architecture mentions in many job postings is worth noting.

<b>NOC Code</b>	<b>Occupation (Natural and applied sciences and related occupations)</b>	<b>Job Postings</b>
<b>2173</b>	Software engineers and designers	8,102
<b>2171</b>	Information systems analysts and consultants	3,590
<b>2175</b>	Web designers and developers	2,112

2147	Computer engineers (except software engineers and designers)	2,022
2172	Database analysts and data administrators	1,327
2283	Information systems testing technicians	773
2131	Civil engineers	689
2282	User support technicians	664
2253	Drafting technologists and technicians	593
2281	Computer network technicians	585
2161	Mathematicians, statisticians and actuaries	565
2132	Mechanical engineers	517
2133	Electrical and electronics engineers	446
2174	Computer programmers and interactive media developers	375
2148	Other professional engineers, not elsewhere classified (n.e.c.)	300
2252	Industrial designers	243
2141	Industrial and manufacturing engineers	216
2234	Construction estimators	213
2121	Biologists and related scientists	155
2151	Architects	150
2263	Inspectors in public and environmental health and occupational health and safety	148
2241	Electrical and electronics engineering technologists and technicians	145
2153	Urban and land use planners	121
2233	Industrial engineering and manufacturing technologists and technicians	103

<b>NOC Code</b>	<b>Occupation (Management occupations)</b>	<b>Job Postings</b>
0125	Other business services managers	2,945
0124	Advertising, marketing and public relations managers	2,061
0213	Computer and information systems managers	1,230
0601	Corporate sales managers	996
0211	Engineering managers	481

<b>0122</b>	Banking, credit and other investment managers	411
<b>0711</b>	Construction managers	389
<b>0311</b>	Managers in health care	330
<b>0911</b>	Manufacturing managers	302
<b>0114</b>	Other administrative services managers	263
<b>0421</b>	Administrators - post-secondary education and vocational training	142
<b>0112</b>	Human resources managers	135
<b>0511</b>	Library, archive, museum and art gallery managers	128
<b>0731</b>	Managers in transportation	104
<b>0111</b>	Financial managers	103

<b>NOC Code</b>	<b>Occupation (Business, finance and administration occupations)</b>	<b>Job Postings</b>
<b>1122</b>	Professional occupations in business management consulting	1,655
<b>1121</b>	Human resources professionals	1,121
<b>1123</b>	Professional occupations in advertising, marketing and public relations	569
<b>1112</b>	Financial and investment analysts	432
<b>1111</b>	Financial auditors and accountants	367
<b>1241</b>	Administrative assistants	294
<b>1211</b>	Supervisors, general office and administrative support workers	292
<b>1223</b>	Human resources and recruitment officers	261
<b>1225</b>	Purchasing agents and officers	255
<b>1523</b>	Production logistics co-ordinators	221
<b>1226</b>	Conference and event planners	175
<b>1411</b>	General office support workers	151
<b>1311</b>	Accounting technicians and bookkeepers	127

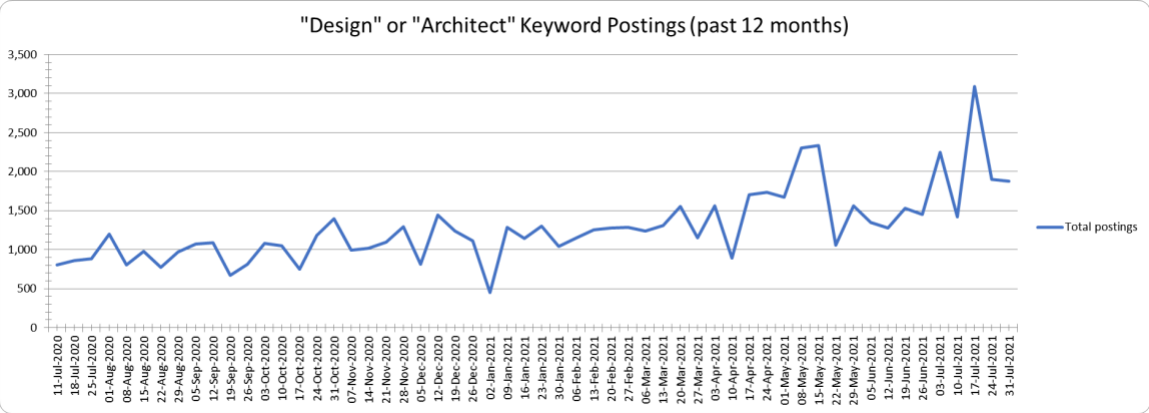
<b>NOC Code</b>	<b>Occupation (All other)</b>	<b>Job Postings</b>
<b>4163</b>	Business development officers and marketing researchers and consultants	1,154



<b>6411</b>	Sales and account representatives - wholesale trade (non-technical)	1,151
<b>5241</b>	Graphic designers and illustrators	818
<b>5243</b>	Theatre, fashion, exhibit and other creative designers	551
<b>6421</b>	Retail salespersons	501
<b>6211</b>	Retail sales supervisors	456
<b>6552</b>	Other customer and information services representatives	382
<b>6221</b>	Technical sales specialists - wholesale trade	286
<b>4162</b>	Economists and economic policy researchers and analysts	258
<b>5121</b>	Authors and writers	247
<b>6733</b>	Janitors, caretakers and building superintendents	246
<b>7452</b>	Material handlers	203
<b>5254</b>	Program leaders and instructors in recreation, sport and fitness	180
<b>9619</b>	Other labourers in processing, manufacturing and utilities	171
<b>4166</b>	Education policy researchers, consultants and program officers	167
<b>4011</b>	University professors and lecturers	146
<b>7611</b>	Construction trades helpers and labourers	145
<b>6541</b>	Security guards and related security service occupations	123
<b>6622</b>	Store shelf stockers, clerks and order fillers	122
<b>8612</b>	Landscaping and grounds maintenance labourers	121
<b>9415</b>	Inspectors and testers, mineral and metal processing	118
<b>4423</b>	By-law enforcement and other regulatory officers, not elsewhere classified (n.e.c.)	106
<b>7301</b>	Contractors and supervisors, mechanic trades	99
<b>5242</b>	Interior designers and interior decorators	97
<b>5223</b>	Graphic arts technicians	92

## Past 12 Months (July 2020 – August 2021) Postings

The chart below shows the total number of job postings by week for the past 12 months. The average number of postings per week was 1,282. The highest number was 3,094 in the week of July 17, 2021, and the lowest was 454 in the week of January 2, 2021. Overall, during the past 12 months, the number of job postings increased during this period by about 20 jobs per week on average. Increasing by nearly 1,000 jobs from an average of about 750 in July 2020 to 1,750 in July 2021.



The table below shows the total number of job postings and the total share for the past 12 months by industry sector. The total number of postings only includes detailed industries in the top 200 while the share is the average of the quarterly share for all job postings. The difference, like for Manufacturing, is explained by postings in specific industries that don't make the top 200.

NAICS	Industry Sector	Total Postings	Share of All Postings
52	Finance and Insurance	9,392	23.0%
54	Professional, Scientific, and Technical Services	7,485	23.3%
51	Information	3,659	8.5%
31-33	Manufacturing	2,790	11.6%
44-45	Retail Trade	2,487	6.8%
61	Educational Services	2,140	5.2%
62	Health Care and Social Assistance	1,645	4.1%
56	Administrative and Support and Waste Management and Remediation Services	1,061	2.6%
48-49	Transportation and Warehousing	938	2.6%
23	Construction	834	2.9%
92	Public Administration	664	1.7%
81	Other Services (except Public Administration)	502	1.4%
53	Real Estate and Rental and Leasing	430	2.0%
72	Accommodation and Food Services	405	1.3%
42	Wholesale Trade	326	0.7%
71	Arts, Entertainment, and Recreation	280	0.6%
22	Utilities	253	0.8%
21	Mining, Quarrying, and Oil and Gas Extraction	80	0.4%
55	Management of Companies and Enterprises	39	0.2%
11	Agriculture, Forestry, Fishing and Hunting		0.2%

Most “Design” or “Architect” jobs are in Finance and Insurance or Professional, Scientific, and Technical Services with roughly one-in-ten jobs posted in each of Information or Manufacturing. Retail is the next largest sector, but since Covid, jobs in Retail have been lower. The three tables below show the total number of postings for the top industry sectors. Information, Manufacturing and Retail are combined and only show the top 25 industries. The Finance Industry is primarily employment in Banks and Insurance. Professional services are as expected with Architectural and Design Services. The others are more divided among Software/IT, Manufacturing (including semiconductors, pharmaceuticals and measurement devices), and Retail. Although Software and IT jobs have been excluded from the detailed analysis and scope of this

report, they still encompass both design and architectural concepts and language in their job postings and so are included here.

<b>NAICS</b>	<b>Industry (Finance and Insurance)</b>	<b>Job Postings</b>
<b>5221</b>	Depository Credit Intermediation	6,138
<b>5241</b>	Insurance Carriers	1,813
<b>5239</b>	Other Financial Investment Activities	408
<b>5231</b>	Securities and Commodity Contracts Intermediation and Brokerage	345
<b>5222</b>	Nondepository Credit Intermediation	195
<b>5232</b>	Securities and Commodity Exchanges	169
<b>5242</b>	Agencies, Brokerages, and Other Insurance Related Activities	129
<b>5223</b>	Activities Related to Credit Intermediation	128
<b>5251</b>	Insurance and Employee Benefit Funds	51
<b>5259</b>	Other Investment Pools and Funds	13
<b>5211</b>	Monetary Authorities-Central Bank	3

<b>NAICS</b>	<b>Industry (Professional, Scientific, and Technical Services)</b>	<b>Job Postings</b>
<b>5413</b>	Architectural, Engineering, and Related Services	1,898
<b>5416</b>	Management, Scientific, and Technical Consulting Services	1,770
<b>5415</b>	Computer Systems Design and Related Services	1,106
<b>5412</b>	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	792
<b>5417</b>	Scientific Research and Development Services	628
<b>5414</b>	Specialized Design Services	545
<b>5419</b>	Other Professional, Scientific, and Technical Services	465
<b>5418</b>	Advertising, Public Relations, and Related Services	177
<b>5411</b>	Legal Services	104

<b>NAICS</b>	<b>Industry (Information, Manufacturing, Retail Trade)</b>	<b>Job Postings</b>
5112	Software Publishers	987
5171	Wired Telecommunications Carriers	924
3344	Semiconductor and Other Electronic Component Manufacturing	780
4541	Electronic Shopping and Mail-Order Houses	558
5172	Wireless Telecommunications Carriers (except Satellite)	495
3254	Pharmaceutical and Medicine Manufacturing	457
4451	Grocery Stores	384
5191	Other Information Services	383
4481	Clothing Stores	300
4413	Automotive Parts, Accessories, and Tire Stores	298
4411	Automobile Dealers	258
5152	Cable and Other Subscription Programming	217
3363	Motor Vehicle Parts Manufacturing	202
4521	Department Stores	185
5151	Radio and Television Broadcasting	177
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	176
5179	Other Telecommunications	154
3333	Commercial and Service Industry Machinery Manufacturing	130
5182	Data Processing, Hosting, and Related Services	126
4461	Health and Personal Care Stores	120
5111	Newspaper, Periodical, Book, and Directory Publishers	109
4441	Building Material and Supplies Dealers	100
5121	Motion Picture and Video Industries	81
3121	Beverage Manufacturing	80

The table below shows the total number of job postings and the total share for the past 12 months by occupational family group. The total number of postings only includes detailed occupations in the top 200 while the share is the average of the quarterly share for all job postings. There is little difference between the two as the top 200 occupations account for almost all with either keyword.

<b>NOC Family</b>	<b>Family Desc</b>	<b>Total Postings</b>	<b>Share of All Postings</b>
<b>2</b>	Natural and applied sciences and related occupations	28,967	44.4%
<b>0</b>	Management occupations	12,992	21.0%
<b>1</b>	Business, finance and administration occupations	8,222	12.6%
<b>6</b>	Sales and service occupations	4,127	6.7%
<b>4</b>	Occupations in education, law and social, community and government services	4,115	6.3%
<b>5</b>	Occupations in art, culture, recreation and sport	2,374	3.8%
<b>7</b>	Trades, transport and equipment operators and related occupations	1,528	2.6%
<b>9</b>	Occupations in manufacturing and utilities	731	1.4%
<b>3</b>	Health occupations	295	0.7%
<b>8</b>	Natural resources, agriculture and related production occupations	293	0.5%

Most occupations are in Natural and Applied Sciences (nearly half) with Management and Business occupations comprising another third.

The four tables below show the specific occupations within the top three occupation families (Natural and Applied Science, Management, Business) and for all other occupation families. Only the most prevalent occupations (roughly 100+) are shown for each. As with industry, many of the occupations are Software/IT related, but as with industry, the ubiquity of design and/or architecture in many job postings is shown.

<b>NOC Code</b>	<b>Occupation (Natural and applied sciences and related occupations)</b>	<b>Job Postings</b>
<b>2173</b>	Software engineers and designers	9,260
<b>2171</b>	Information systems analysts and consultants	4,619
<b>2147</b>	Computer engineers (except software engineers and designers)	2,215
<b>2175</b>	Web designers and developers	2,102

2172	Database analysts and data administrators	1,753
2283	Information systems testing technicians	1,005
2282	User support technicians	774
2161	Mathematicians, statisticians and actuaries	721
2131	Civil engineers	687
2253	Drafting technologists and technicians	678
2281	Computer network technicians	633
2133	Electrical and electronics engineers	550
2132	Mechanical engineers	495
2151	Architects	384
2148	Other professional engineers, not elsewhere classified (n.e.c.)	358
2252	Industrial designers	339
2174	Computer programmers and interactive media developers	326
2234	Construction estimators	248
2141	Industrial and manufacturing engineers	196
2241	Electrical and electronics engineering technologists and technicians	190
2121	Biologists and related scientists	188
2263	Inspectors in public and environmental health and occupational health and safety	161
2153	Urban and land use planners	135
2233	Industrial engineering and manufacturing technologists and technicians	126
2134	Chemical engineers	114

<b>NOC Code</b>	<b>Occupation (Management occupations)</b>	<b>Job Postings</b>
0125	Other business services managers	3,463
0124	Advertising, marketing and public relations managers	2,842
0213	Computer and information systems managers	1,708
0601	Corporate sales managers	1,249
0711	Construction managers	561

<b>0211</b>	Engineering managers	552
<b>0122</b>	Banking, credit and other investment managers	499
<b>0311</b>	Managers in health care	359
<b>0911</b>	Manufacturing managers	317
<b>0114</b>	Other administrative services managers	316
<b>0421</b>	Administrators - post-secondary education and vocational training	168
<b>0731</b>	Managers in transportation	154
<b>0112</b>	Human resources managers	137
<b>0111</b>	Financial managers	125
<b>0712</b>	Home building and renovation managers	115

<b>NOC Code</b>	<b>Occupation (Business, finance and administration occupations)</b>	<b>Job Postings</b>
<b>1122</b>	Professional occupations in business management consulting	2,308
<b>1121</b>	Human resources professionals	1,403
<b>1123</b>	Professional occupations in advertising, marketing and public relations	733
<b>1111</b>	Financial auditors and accountants	466
<b>1112</b>	Financial and investment analysts	430
<b>1211</b>	Supervisors, general office and administrative support workers	370
<b>1241</b>	Administrative assistants	304
<b>1223</b>	Human resources and recruitment officers	302
<b>1523</b>	Production logistics co-ordinators	288
<b>1225</b>	Purchasing agents and officers	281
<b>1311</b>	Accounting technicians and bookkeepers	191
<b>1411</b>	General office support workers	178
<b>1226</b>	Conference and event planners	130
<b>1252</b>	Health information management occupations	113
<b>1253</b>	Records management technicians	102
<b>1114</b>	Other financial officers	100



<b>NOC Code</b>	<b>Occupation (All other)</b>	<b>Job Postings</b>
4163	Business development officers and marketing researchers and consultants	1,770
6411	Sales and account representatives - wholesale trade (non-technical)	1,192
5241	Graphic designers and illustrators	709
6421	Retail salespersons	551
4216	Other instructors	488
5243	Theatre, fashion, exhibit and other creative designers	487
6211	Retail sales supervisors	432
6552	Other customer and information services representatives	390
4011	University professors and lecturers	364
5121	Authors and writers	363
6221	Technical sales specialists - wholesale trade	318
7452	Material handlers	282
4162	Economists and economic policy researchers and analysts	274
6733	Janitors, caretakers and building superintendents	266
8612	Landscaping and grounds maintenance labourers	215
9619	Other labourers in processing, manufacturing and utilities	212
4166	Education policy researchers, consultants and program officers	168
7611	Construction trades helpers and labourers	159
9415	Inspectors and testers, mineral and metal processing	153
5136	Painters, sculptors and other visual artists	146
6541	Security guards and related security service occupations	141
4165	Health policy researchers, consultants and program officers	135
7301	Contractors and supervisors, mechanic trades	130
4423	By-law enforcement and other regulatory officers, not elsewhere classified (n.e.c.)	121
6341	Hairstylists and barbers	119
5223	Graphic arts technicians	116
7271	Carpenters	115

<b>9417</b>	Machining tool operators	108
<b>6235</b>	Financial sales representatives	108
<b>4033</b>	Educational counsellors	108
<b>5254</b>	Program leaders and instructors in recreation, sport and fitness	103
<b>5122</b>	Editors	101

## Comparing 2019 to the Past 12 Months

In comparing 2019 to the past 12 months, the first seven months of 2020 are not included. As seen in the overall monthly charts (at the beginning), job posting activity decreased at the beginning of 2020 but then saw accelerated growth starting in May. The 2019 numbers represent the “steady state” prior to Covid. The impact of Covid is seen as is the recovery (at least for job postings).

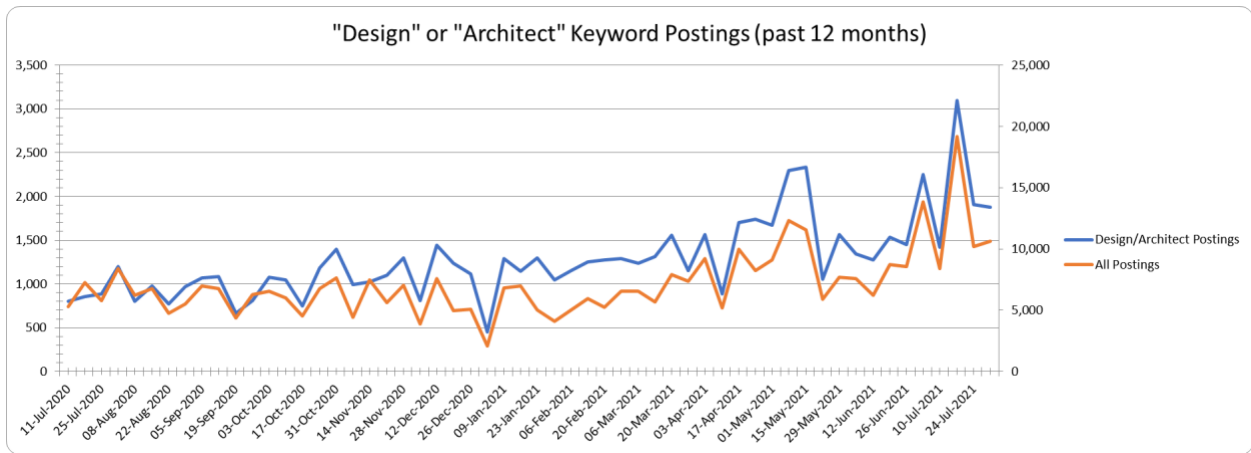
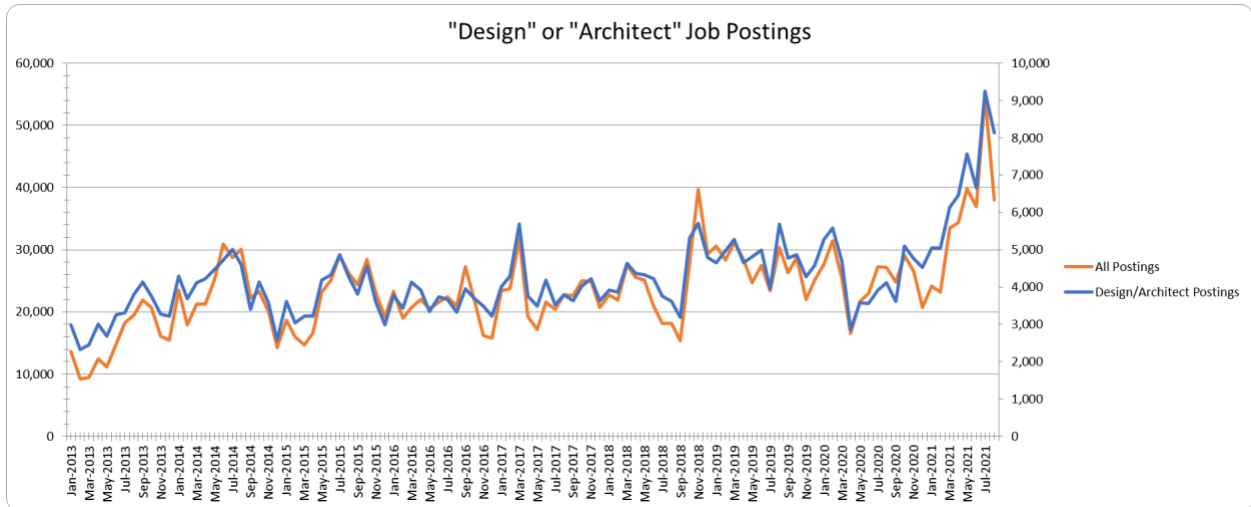
While the most recent 6 (2021) of the past 12 months have seen significant increases in the number of job postings, the early 6 (second half of 2020) was similar to 2019 with only a slight average increase, week to week.

While the number of postings has increased, the share of job postings by industry is generally consistent. Education and Health Care, which combined accounted for only about 1 in 15 Design jobs in 2019, increased to be above 1 in 10 over the past 12 months, but those are sectors which have seen overall increases from Covid and related factors. The specific posting industries with the industry sectors remained stable between the two timeframes.

As with industry, when investigated by occupation, the number of postings has increased, but the share among occupational family groups has remained steady. Education, law and social and government services increased its share from 4.9% in 2019 to 6.3% over the past 12 months. This is in line with the industry increases. The top specific occupations within each occupation family have also remained steady with almost all the top 10 occupations within each family from 2019 remaining in the top 10 for the past 12 months.

## Comparing Design/Architect to All Job Postings

Generally similar – although the most recent months show a slightly larger increase for Design/Architect in the most recent months.



Looking at just the past 12 months, you can see how Des/Arch was tracking with all postings but then jumps higher and stays above (relatively speaking since the number of postings is always higher for all).

But, still very similar. So the growth mainly reflects the overall job market rather than something specific to the Design Sector.

## Companies by Industry (City of Toronto, D&B Hoovers)

### Architectural Services

Company Name	Employees (All Sites)	Employees (Single Site)	Revenue (USD)	NAICS 2017 Description
<b>Total (top 250) – 110 firms</b>	4,554	2,973	795M	
Ingenium Group Inc	1000	1	190M	Architectural Services
HOK Architects Corporation	227	102	39M	Architectural Services
NORR Limited	220	192	41M	Architectural Services
Daniels LR Corporation	200	200	34M	Architectural Services
Adamson Associates	200	0	34M	Architectural Services
Zeidler Partnership Architects	180	95	34M	Architectural Services
Diamond and Schmitt Architects Incorporated	135	135	23M	Architectural Services
CORE Architects Inc	115	115	19M	Architectural Services
Allied Technical Sales Inc	115	115	21M	Architectural Services
KPMB Architects	101	101	17M	Architectural Services
Quadrangle Architects Limited	100	100	17M	Architectural Services

### Graphic Design Services

Company Name	Employees (All Sites)	Employees (Single Site)	Revenue (USD)	NAICS 2017 Description
<b>Total (top 250) – 61 firms</b>	1,348	983	254M	
Interpublic Group of Companies Canada, Inc, The	300	5	65M	Graphic Design Services
Pigeon Brands Inc	80	60	15M	Graphic Design Services
Bridgeable Inc	50	50	8.6M	Graphic Design Services
Shikatani Lacroix Design Inc	45	45	9.2M	Graphic Design Services
Jam3 Inc	40	40	6.8M	Graphic Design Services
Meadow Wood Communication Group Inc, The	38	1	7.7M	Graphic Design Services
Works Design Communications Ltd, The	38	38	6.5M	Graphic Design Services
SFP Inc	35	35	7.1M	Graphic Design Services
Central Station Marketing Inc	33	33	6.6M	Graphic Design Services
Mau, Bruce Design Inc	30	30	6.1M	Graphic Design Services
Artshouse Communications Inc	30	30	5.1M	Graphic Design Services

### Industrial Design Services

Company Name	Employees (All Sites)	Employees (Single Site)	Revenue (USD)	NAICS 2017 Description
<b>Total (top 250) – 14 firms</b>	265	186	114M	
Watt International Inc	50	1	21M	Industrial Design Services
Qualcomm Atheros Canada Corporation	50	50	32M	Industrial Design Services
InteraXon Inc	30	0	13M	Industrial Design Services
DTAH Architects Limited	20	20	8.5M	Industrial Design Services
Kerr & Company Inc	20	20	6.5M	Industrial Design Services
Kramer Design Associates Ltd	17	17	7.2M	Industrial Design Services
Taylor/Sprules Corporation	15	15	4.8M	Industrial Design Services
Cricket Design Company Inc	10	10	3.2M	Industrial Design Services
Infrastructure Interior Design Inc	10	10	3.2M	Industrial Design Services
Watt International Inc	50	1	21M	Industrial Design Services

## Interior Design Services

Company Name	Employees (All Sites)	Employees (Single Site)	Revenue (USD)	NAICS 2017 Description
<b>Total (top 250) – 41 firms</b>	800	688	335M	
Event Rental Group GP Inc	180	180	116M	Interior Design Services
Figure3	55	55	7.5M	Interior Design Services
Straticom Planning Associates Inc	40	40	17M	Interior Design Services
Vretta Inc	35	0	14M	Interior Design Services
2161457 Ontario Inc	30	0	13M	Interior Design Services
Cecconi Simone Inc	30	30	12M	Interior Design Services
Burdifilek Inc	25	25	10M	Interior Design Services
X-Design Inc	21	20	9.1M	Interior Design Services
Smith Grimley Harris Design Partners Inc	20	1	8.5M	Interior Design Services
Gluckstein Design Planning Inc	20	20	8.5M	Interior Design Services

## Landscape Architectural Services

Company Name	Employees (All Sites)	Employees (Single Site)	Revenue (USD)	NAICS 2017 Description
<b>Total (top 250) – 18 firms</b>	372	366	47M	
NAK Design Strategies Inc	58	58	6.1M	Landscape Architectural Services
MBTW Group, The	55	55	9.2M	Landscape Architectural Services
Land Design Incorporated	54	54	5.6M	Landscape Architectural Services
Architects Alliance	45	45	4.7M	Landscape Architectural Services
Squires Lawn & Garden Co Ltd	20	20	2.7M	Landscape Architectural Services
Janet Rosenberge And Associates Landscape Architects Inc.	16	16	2.2M	Landscape Architectural Services
Mark Goger Stone Work	16	16	2.1M	Landscape Architectural Services
O'Brien, Brendan Landscaping Inc	12	12	1.6M	Landscape Architectural Services
Ferris + Associates Inc.	12	12	1.6M	Landscape Architectural Services
Earth Inc	12	12	1.6M	Landscape Architectural Services
NAK Design Strategies Inc	58	58	6.1M	Landscape Architectural Services

## Other Specialized Design Services

Company Name	Employees (All Sites)	Employees (Single Site)	Revenue (USD)	NAICS 2017 Description
<b>Total (top 250) – 4 firms</b>	68	68	17M	
Seamless Costumes	30	30	4.5M	Other Specialized Design Services
Creative Matters Incorporated	15	15	6.4M	Other Specialized Design Services
1179312 Ontario Inc	13	13	1.9M	Other Specialized Design Services
Caftcad	10	10	4.2M	Other Specialized Design Services