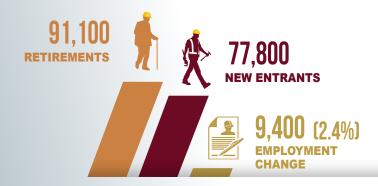# ONTARIO

Ontario's construction industry strives to reach the summit

Ontario, led by the Greater Toronto Area (GTA), is expected to remain one of the hottest construction markets in Canada. As major project requirements approach an anticipated plateau in 2020, keeping pace with rising employment demands across most of the province's regions will remain a challenge for industry. Following a banner 2017, a moderation in the pace of new homebuilding should relieve market pressures for a number of selected trades and regions, but challenges are likely to intensify for others more directly involved in the numerous major projects under construction across the province.

The 2019–2028 outlook scenario for Ontario projects overall employment will be sustained at high levels over the decade, driven by major nuclear refurbishment projects in the GTA and Southwestern Ontario and continued investment in rising public transportation and infrastructure to keep pace with a growing population. The pace of activity in new homebuilding is expected to moderate, but population growth sustains high levels of demand for condo, mid- and high-rise markets in urban centres.
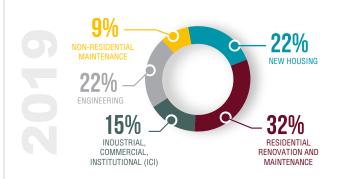
The construction and maintenance industry will need to hire, train, and retain almost 103,900 additional workers over the coming decade, as 91,100 workers are expected to retire – 21.5% of Ontario's current construction labour force. The industry can potentially draw 77,800 new entrants aged 30 and younger from the local population, but a projected gap created by growing employment of an additional 26,100 workers will need to be met from outside the province's construction labour force.

DISTRIBUTION OF CONSTRUCTION EMPLOYMENT IN 2019, ONTARIO

2019

9% NON-RESIDENTIAL MAINTENANCE

22% ENGINEERING

15% INDUSTRIAL, COMMERCIAL, INSTITUTIONAL (ICI)

22% NEW HOUSING

32% RESIDENTIAL RENOVATION AND MAINTENANCE

HIGHLIGHTS

- Increasing levels of immigration remain a strong driver of population growth and housing demand across the province.

- Housing starts are expected to decline by 8,500 units in 2019 (from 77,700) due to continued declines in low-rise housing construction in most regions of the province.

- Overall non-residential employment is anticipated to rise by a further 14,000 jobs (+8%) over the next four years.

- The most significant near-term growth is expected in the GTA and Southwestern Ontario.

- 103,900 additional construction workers are needed to meet demands from rising employment and age-related attrition over the coming decade.

10-YEAR WORKFORCE OUTLOOK FOR ONTARIO

2028

91,100 RETIREMENTS

77,800 NEW ENTRANTS

9,400 (2.4%) EMPLOYMENT CHANGE

JOB — **AVERAGE UNEMPLOYMENT RATE** **6.5%**

BuildForce's LMI System

BuildForce Canada uses a scenario-based forecasting system to assess future construction labour requirements in the heavy industrial, residential, and non-residential construction markets. This labour market information (LMI) system tracks 34 trades and occupations. To further improve the robustness of the system, BuildForce consults with industry stakeholders, including owners, contractors, and labour groups, to validate the scenario assumptions and construction project lists, and seeks input from government on related analysis. The information is then distilled into labour market condition rankings to help industry employers with the management of their respective human resources.

ONTARIO CONSTRUCTION OUTLOOK

Construction activity continues to build in Canada's largest and most diverse construction market, but anticipated declines in the construction of new housing are likely to see residential and non-residential markets diverge as labour requirements for major non-residential projects continue to rise to peak levels in 2020.

Strong population growth, supported by rising levels of immigration, economic expansion, and significant new investment in public transportation and other infrastructure added 58,600 Ontario construction jobs between 2014 and 2017 – a 12% increase over three years. The pace and breadth of growth – across all segments and regions of the province – has driven unemployment to historically low levels, resulting in the emergence of labour market challenges for many trades across all regions of the province.

The 2019–2028 *Construction and Maintenance Looking Forward* outlook scenario for Ontario anticipates overall construction employment will be sustained at very high levels across the decade in most regions. Major public transportation projects, including multiple light rail transit (LRT) projects in the Greater Toronto, Hamilton, and Ottawa areas, and other infrastructure-related demands rise to a peak in 2020. At the same time, moderate sustained growth in the requirements related to ICI (industrial, commercial, institutional) building construction, as well as overlapping demands from two major nuclear refurbishment projects in the GTA and Southwestern Ontario sustain employment requirements for many trades and occupations over the latter half of the scenario period.

Overall non-residential employment is anticipated to rise by 14,000 jobs (+8%) over the next four years, and by 17,000 over the entire coming decade, compared to the 2018 starting point. The largest near-term increases are expected for key industrial trades, including boilermakers, millwrights, and pipefitters.

Further strengthening of the manufacturing and warehousing sectors helps to sustain recent positive trends in the construction of industrial buildings, while continued strengthening in institutional and commercial building construction is expected to be sustained by steady immigration-driven population growth.

New homebuilding, which reached high levels in 2017, slowed in 2018 and is projected to recede further in 2019 due to continued declines in the single-family low-rise residential market; a casualty of restricted affordability and land availability pressures. Overall housing starts are expected to remain near current levels over the decade, sustained by pent-up housing demands and continued immigration-driven population growth. Capacity constraints limit the pace of growth of mid- and high-rise condo and apartment construction. Renovation activity is expected to recede slightly but remain at high levels over the decade. Total employment in the residential sector is projected to decline by 7.5% or 16,900 jobs through to 2022, before strengthening again over the latter half of the decade.

Labour demands are stacking up across Ontario. The most significant near-term growth is expected in Southwestern Ontario where requirements related to nuclear refurbishment, the Gordie Howe International Bridge, and the construction of industrial buildings increase non-residential employment by 4,000 workers between 2018 and 2021 – an 18% increase over three years. Over the same period, the GTA will likely require an additional 5,300 workers to meet peak demands for the Eglinton LRT, Ontario Power Generation Darlington nuclear refurbishment, and other major public transportation and infrastructure projects. In Eastern Ontario, phase two of the Ottawa LRT, new hospital projects, and revitalization projects at Canadian Nuclear Laboratories' Chalk River facilities contribute to an additional 3,200 workers needed by 2021, or a 15% increase compared to 2018. Labour demands for projects in Central and Northern Ontario are more modest, but also positive. Taken together, competing non-residential demands across regions are likely to limit the potential for labour force mobility to meet peak major project requirements, which draw on many of the same trades and occupations. The anticipated slowing pace of residential construction presents a potential supply pool of workers for those with matching skills and qualifications.

Table 1 summarizes the percent change in residential and non-residential employment by region over two periods: 2019–2020 and 2021–2028.

THE AVAILABLE LABOUR FORCE

The anticipated retirement of more than 91,100 workers will be a key driver of hiring and training requirements over the coming decade. Considering projected growth, industry will likely need to hire, train and retain almost 103,900 additional workers between 2019 and 2028. While the age profile of the Ontario population is growing older, natural population growth (births less deaths) plus immigration and migration to the province are expected to sustain positive population growth across the scenario period.

Table 1: Changes in total employment across Ontario's regions

REGION	2019–2020 (% CHANGE)			2021–2028 (% CHANGE)		
	Residential	Non–Residential	Total	Residential	Non–Residential	Total
Total employment – Ontario	–5.8%	7.4%	–0.1%	2.8%	2.1%	2.4%
Central	–5.7%	3.7%	–2.0%	7.9%	7.3%	7.6%
Eastern	–4.5%	9.1%	1.7%	–1.3%	–4.9%	–3.1%
Greater Toronto Area	–6.3%	7.4%	–0.5%	2.2%	0.6%	1.5%
Northern	–1.5%	3.9%	2.0%	–9.7%	–7.5%	–8.3%
Southwestern	–6.9%	15.1%	2.4%	0.4%	10.0%	5.0%

Source: Statistics Canada, BuildForce Canada

Nevertheless, the pool of available local youth to enter the labour force is declining, creating challenges to recruit the required 77,800 new entrants age 30 and younger from the local population into the construction labour force. Adding to this challenge is the projected gap created by growing employment that will require the recruitment of an additional 26,100 workers from other industries or from outside the province to create the labour market flexibility necessary to continue delivering projects in a timely manner.

The rapid rise in construction labour demand – spanning all sectors and regions in the province – has driven down unemployment rates to levels not experienced since before the 2008 downturn, and disrupted traditional patterns of recruitment and mobility between residential and non-residential market segments. The labour force is older compared to a decade ago, and meeting even small increments in employment and replacement (age-related attrition) demands at current low levels of unemployment present recruiting challenges.

Labour requirements are not distributed evenly across Ontario's regions or over the scenario period. Peak demands are expected to be concentrated between 2019 and 2021, with demand easing thereafter in most regions as many projects wind down and new housing construction continues to slow. These dynamics are expected to return labour markets to balanced conditions, except for a few selected trades and occupations with specialized skills and experience that will remain under considerable pressure throughout the decade, driven by demands related to nuclear refurbishment projects.

The BuildForce LMI system tracks residential and non-residential supply and accounts for the change in the available labour force, including retirements, new entrants[1], and net in-mobility[2].

RESIDENTIAL SECTOR

In the residential sector, industry must contend with an estimated 50,800 retirements over the coming decade, despite a modest workforce decline of 7,300 workers over the scenario period. This exceeds the estimated number of first-time new entrants aged 30 and younger expected to be drawn into the residential labour force from the local population.

Table 2 provides a summary of changes in the residential labour force in 2018, the five-year period between 2019 and 2023, and across the full scenario period.

NON–RESIDENTIAL SECTOR

The non-residential sector is expected to draw a similar number of first-time new entrants aged 30 and younger from the local population into the labour force to meet the expected replacement demand of close to 40,300 workers over the decade. Rising employment requirements may require the recruitment of additional workers from outside the provincial labour force or locally from outside the industry.

Table 3 provides a summary of changes in the non-residential labour force in 2018, the five-year period between 2019 and 2023, and across the full scenario period.

Table 2: Changes in the residential labour force, Ontario

RESIDENTIAL LABOUR FORCE ADJUSTMENT		2018	5 years 2019–2023	10 years 2019–2028
Demand	Labour force change	–1,800	–16,600	–6,400
	Retirements	5,200	25,700	50,800
Supply	New entrants	4,400	19,800	38,700
	Net mobility	–1,100	–10,600	5,700

Source: BuildForce Canada

Table 3: Changes in the non–residential labour force, Ontario

NON–RESIDENTIAL LABOUR FORCE ADJUSTMENT		2018	5 years 2019–2023	10 years 2019–2028
Demand	Labour force change	4,000	17,400	19,200
	Retirements	3,900	20,300	40,300
Supply	New entrants	4,000	20,100	39,100
	Net mobility	3,900	17,600	20,400

Source: BuildForce Canada

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[1] **New entrants** are measured by applying the traditional proportion of the provincial labour force that enters the construction industry. The projected estimate across the scenario period assumes the construction industry can recruit this group in competition with other industries.

[2] **In-mobility** refers to the arrival of workers from outside the local construction industry. In-mobility includes the interprovincial employee workforce. Many members of this group will move quickly out of the province as work declines and this out-mobility, even if it is a very short-term change, signals a weak market.

REGIONAL INSIGHTS

The following sections provide region-specific outlook highlights and labour market conditions for Ontario's five regions: Central, Eastern, Greater Toronto Area (GTA), Northern, and Southwestern.

BuildForce assesses market conditions for 34 construction trades and occupations using a ranking system that combines measures of the change in employment, unemployment, net in-mobility, and adjustments based on industry input. The rankings reflect residential and non-residential market conditions unique to each region based on current and proposed construction activity. In addition, assumptions on regional economic and population growth, new entrants to the labour force, and migration patterns (interprovincial and international) are built into the forecast scenario and included in the ranking assessments.

The rankings for some trades are suppressed due to the small size of the workforce (<100 workers) and limited statistical reliability when assessing labour market conditions at the sector level. Some trades are also excluded because they typically do not work in the sector being assessed (e.g., boilermakers and millwrights in residential construction, and homebuilding and renovation managers in non-residential).

CENTRAL ONTARIO

Central Ontario[3] has benefited from spillover effects driven by significant expansion in the GTA, as well as strengthening demands in the manufacturing and technology sectors and overall economic

diversification. A total of 27,000 new construction jobs were added in the region between 2011 and 2017 – an increase of 23% over the seven-year period.

Construction activity in Central Ontario is expected to see steady, modest growth over the next decade, but new residential construction is projected to recede over the near term, while non-residential ICI building construction is expected to rise steadily.
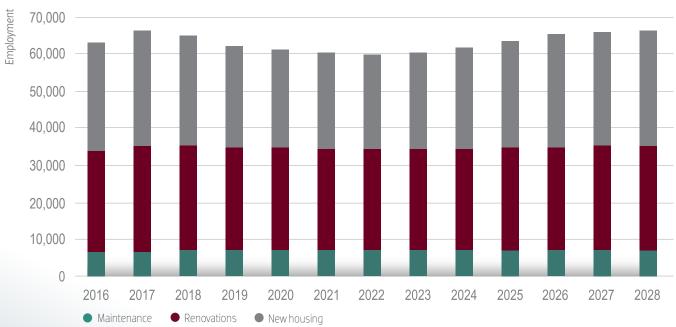
A continued decline in housing starts in 2019, from the high reached in 2017, returns construction activity in the region to pre-2016 levels. Growth is expected to resume after 2022, driven by population growth. Overall construction employment is sustained by strengthening institutional and commercial building construction and major investments in public transportation, including the planned Hamilton LRT, Barrie Rail Corridor Expansion, and other infrastructure projects.

The continued shift of labour requirements from residential to ICI building construction contributes to sustaining generally balanced labour market conditions in the region. Rising demands in the GTA and Southwestern Ontario, however, are likely to continue maintaining downward pressure on local unemployment resulting in periodic recruitment challenges, as local workers may be drawn away to work in these regions.

RESIDENTIAL SECTOR

The construction of new housing has been a key driver of growth in many parts of Central Ontario. Housing starts increased from 11,300 units in 2013 to 17,500 in 2016 and 2017. The slowing pace

Figure 1: Residential construction employment growth outlook, Central Ontario

Source: Statistics Canada, BuildForce Canada

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[3] **Central Ontario** includes the economic regions of Muskoka-Kawarthas, Kitchener-Waterloo-Barrie, and Hamilton-Niagara Peninsula as defined by Statistics Canada, which includes the Census Metropolitan Areas (CMAs) of St. Catharines-Niagara, Hamilton, and Kitchener-Waterloo. The region includes such cities as Peterborough, Orangeville, Guelph, Barrie, and Brantford.

RESIDENTIAL HIGHLIGHTS, CENTRAL ONTARIO

- Housing starts are expected to continue cycling down between 2019 and 2022, from the high reached in 2016–2017

- Near-term residential employment may decline a modest 6% between 2019 and 2022, before gradually returning to 2017 levels by 2026.

of population growth and household formation[4], higher interest rates and land supply constraints are expected to reduce housing starts to 14,200 units in 2019 from 17,000 in 2018.

Near-term residential employment, partly supported by rising renovation activity, may decline a modest 8% between 2019 and 2022, before gradually returning to 2018 levels by 2026.

Figure 1 shows the region's employment trends by sector for residential construction.

The BuildForce ranking system isolates market conditions specific to residential construction. The results are summarized in Table 4.

RESIDENTIAL RANKINGS, RISKS ,AND MOBILITY

For Central Ontario, residential rankings are reported for 26 of the 34 trades and occupations covered by the BuildForce LMI system, as shown in Table 4. Labour market conditions returned to balance for most trades in 2018, as demand related to the construction of new housing subsided. A further weakening is expected in 2019, as the pace of new homebuilding slows. Over the scenario period, steady levels of renovation activity should contribute to maintaining generally balanced labour markets, signalled by a rank of 3.

MARKET RANKINGS

1 Workers meeting employer qualifications are available in local markets to meet an increase in demand at the current offered rate of compensation and other current working conditions. Excess supply is apparent and there is a risk of losing workers to other markets.

2 Workers meeting employer qualifications are available in local markets to meet an increase in demand at the current offered rate of compensation and other working conditions.

3 The availability of workers meeting employer qualifications in the local market may be limited by large projects, plant shutdowns or other short-term increases in demand. Employers may need to compete to attract needed workers. Established patterns of recruiting and mobility are sufficient to meet job requirements.

4 Workers meeting employer qualifications are generally not available in local markets to meet any increase. Employers will need to compete to attract additional workers. Recruiting and mobility may extend beyond traditional sources and practices.

5 Needed workers meeting employer qualifications are not available in local markets to meet current demand so that projects or production may be delayed or deferred. There is excess demand, competition is intense and recruiting reaches to remote markets.

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[4]   **Household formation** refers to the change in the number of households (persons living under one roof or occupying a separate housing unit) from one year to the next. It is how population growth is transformed into demand for new housing.

Table 4: Residential market rankings, Central Ontario

TRADES AND OCCUPATIONS — RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bricklayers	3	2	3	3	3	3	3	3	3	3	3
Carpenters	3	2	3	3	3	3	3	3	3	3	3
Concrete finishers	3	2	3	3	3	3	3	3	3	3	3
Construction estimators	3	2	3	3	3	3	3	3	3	3	3
Construction managers	3	2	3	3	2	3	3	4	3	3	3
Contractors and supervisors	3	2	3	3	3	3	3	3	3	3	3
Electricians	3	3	3	2	2	3	3	3	3	3	3
Elevator constructors and mechanics	3	3	3	2	3	3	3	3	3	3	3
Floor covering installers	3	3	3	3	3	3	3	3	3	3	3
Gasfitters	3	2	2	3	3	3	3	3	3	3	3
Glaziers	3	3	3	2	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	2	3	3	3	3	3	3	3	3	3
Homebuilding and renovation managers	3	3	3	3	3	3	3	3	3	3	3
Insulators	3	2	3	3	2	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	3	3	2	2	3	3	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	2	3	3	3	3	3	3	3	3	3
Plumbers	3	2	3	2	2	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	3	3	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	2	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	3	2	3	2	3	3	3	3	3	3	3
Tilesetters	3	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	3	2	3	3	3	3	3	3	3	3	3
Truck drivers	3	2	3	3	3	3	3	3	3	3	3
Welders and related machine operators	3	3	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

NON–RESIDENTIAL SECTOR

Continued economic diversification, strengthening manufacturing, and improved transportation infrastructure are expected to propel increases across all segments of non-residential building construction over the scenario period.

The completion of phase one of the Kitchener-Waterloo LRT project eased labour force demands in 2018. The start of the Hamilton LRT and other public transportation and infrastructure projects should increase labour force requirements between 2019 and 2020 and sustain engineering construction employment at high levels over the decade.
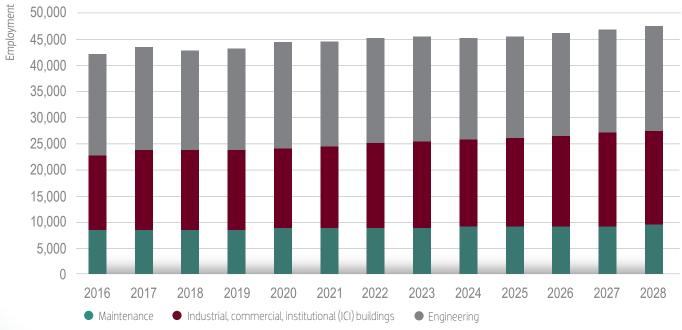
Overall, the non-residential construction sector should add 4,600 jobs in the region – an 11% increase from the 2018 starting point.

Construction of ICI buildings is expected to lead growth, contributing an additional 2,800 jobs. Figure 2 shows the employment trends by sector for non-residential construction in Central Ontario.

NON–RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

For Central Ontario, non-residential rankings are reported for 31 of the 34 trades and occupations covered by the BuildForce LMI system, as shown in Table 5. Across the scenario period, non-residential labour markets are generally balanced, signalled by a rank of 3. Rising demand in the GTA and other regions may affect the availability of workers in Central Ontario if local workers are drawn to major project work outside the region.

Figure 2: Non–residential construction employment growth outlook, Central Ontario

Source: Statistics Canada, BuildForce Canada

NON-RESIDENTIAL HIGHLIGHTS, CENTRAL ONTARIO

- The construction of ICI buildings follows recent population growth, adding 2,800 jobs over the next decade.

- Key projects include the Hamilton LRT and Barrie Rail Corridor Expansion.

- A steady, moderate pace of growth increases overall non-residential employment by 4,800 jobs over the decade – an 11% rise from 2018.

Table 5: Non–residential market rankings, Central Ontario

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Boilermakers	3	3	3	3	3	3	2	3	3	3	3
Bricklayers	3	3	3	3	3	3	3	3	3	3	3
Carpenters	3	3	3	3	3	3	3	3	3	3	3
Concrete finishers	2	3	3	3	3	2	2	3	3	3	3
Construction estimators	3	3	3	3	3	3	3	3	3	3	3
Construction managers	4	4	3	3	3	3	2	3	3	3	3
Construction millwrights and industrial mechanics	3	3	4	3	3	3	3	3	3	3	3
Contractors and supervisors	3	3	3	3	3	3	3	3	3	3	3
Crane operators	3	3	3	3	3	3	3	3	3	3	3
Drillers and blasters	3	3	3	3	3	3	3	3	3	3	3
Electrical power line and cable workers	3	3	4	3	3	3	3	3	3	3	3
Electricians	3	3	3	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	3	3	3	3	3	3	3	3	3	3	3
Floor covering installers	3	3	3	3	3	3	3	3	3	3	3
Gasfitters	3	3	3	3	3	3	3	3	3	3	3
Glaziers	3	3	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	3	3	3	3	3	3	3	3	3	3
Heavy–duty equipment mechanics	3	3	3	3	3	3	3	3	3	3	3
Insulators	3	3	3	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	2	3	3	3	4	2	2	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	3	3	3	3	3	3	3	3	3	3
Plumbers	3	3	3	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	3	3	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	3	3	3	3	3	3	3	3	3	3	3
Steamfitters, pipefitters, and sprinkler system installers	2	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	3	3	3	3	3	3	3	3	3	3	3
Truck drivers	3	3	3	2	3	3	3	3	3	3	3
Welders and related machine operators	3	3	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

EASTERN ONTARIO

Following a pause in engineering construction growth and moderating new residential construction demands in 2018, Eastern Ontario[5] is set to accelerate with the start of the second phase of the Ottawa LRT and the continued growth of ICI building construction.

Non-residential building construction is in its second year of an expansion that should stretch into 2021. Following an anticipated pause between 2021 and 2023, employment related to the construction of ICI buildings is expected to rise a further 10% over the coming decade, led by steady growth in commercial investment.

The pace of new homebuilding is anticipated to decline further in 2019 from the 2017 peak, and then remain relatively stable, before rising again after 2023.

Although total employment is expected to decline by a modest 700 workers over the decade, a net of 11,000 new workers will be needed to replace the 11,400 workers expected to retire between 2019 and 2028. An estimated 8,900 first-time new entrants aged 30 and younger are expected to be drawn from the local population, but an additional 2,100 workers will be required from outside the local construction labour market to meet growing demands.
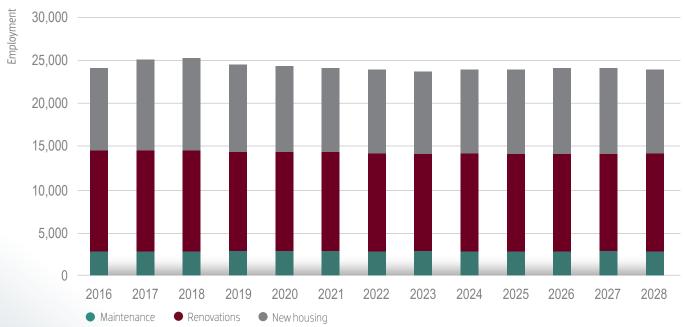
RESIDENTIAL SECTOR

Strong levels of immigration and increases in public-sector employment contributed to the recent rise in both household formation and housing demand. Housing starts have receded from the peak levels of 2017 and are expected to fall further in 2019. Although population growth is expected to recede from recent high levels, starts are expected to be sustained between 9,000 and 10,000 units over the coming decade.

Residential employment is projected to decline by a modest 1,500 jobs (-1.4%) over the decade. Steady increases in renovation work, however, should propel related employment to constitute a larger share of the residential workforce, which has implications for the mix of trade and skill requirements.

Figure 3 shows the employment trends by sector for residential construction in Eastern Ontario.

Figure 3: Residential construction employment growth outlook, Eastern Ontario

Source: Statistics Canada, BuildForce Canada

RESIDENTIAL HIGHLIGHTS, EASTERN ONTARIO

- Housing starts retreat to 9,500 units in 2019; down from a record high 10,500 in 2017. By the end of the scenario period, starts approach 10,000 units again.

- Residential employment is projected to decline by a modest 1,500 jobs (-1.4%) over the decade.

- Steady increases in renovation work account for a larger share of the residential workforce later in the scenario period.

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[5] **Eastern Ontario** includes the economic regions of both Ottawa and Kingston-Pembroke, including the Census Metropolitan Areas (CMAs) of Ottawa and Kingston. Cities include Cornwall, Brockville, Belleville, and Petawawa.

Table 6: Residential market rankings, Eastern Ontario

TRADES AND OCCUPATIONS – RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bricklayers	4	3	3	3	3	3	3	3	3	3	3
Carpenters	4	4	3	3	3	3	3	3	3	3	3
Concrete finishers	3	3	3	3	3	3	3	3	3	3	3
Construction estimators	4	3	3	3	3	3	3	3	3	3	3
Construction managers	4	4	3	3	3	3	3	3	3	3	3
Contractors and supervisors	4	4	3	3	3	3	3	3	3	3	3
Electricians	4	3	3	3	3	3	3	3	3	3	3
Floor covering installers	4	3	3	3	3	3	3	3	3	3	3
Gasfitters	3	3	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	4	3	3	3	3	3	3	3	3	3	3
Homebuilding and renovation managers	4	3	3	3	3	3	3	4	4	3	3
Insulators	4	3	3	3	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	4	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	3	3	3	3	3	3	3	3	3	3
Plumbers	4	3	3	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	3	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	4	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	4	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	3	3	3	3	3	3	3	3	3	3
Tilesetters	4	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	3	3	3	3	3	3	3	3	3	3	3
Truck drivers	4	3	3	3	3	3	3	3	3	3	3
Welders and related machine operators	4	3	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

For Eastern Ontario, residential rankings are reported for 23 of the 34 trades and occupations covered by the BuildForce LMI system, as shown in Table 6. Tighter residential labour markets in 2018 signalled continued recruitment challenges for many trades working in the sector. These conditions reflect the spillover in construction activity from record starts in 2017. Market conditions for trades involved heavily in new construction are expected to return to balance in 2019 as the pace of new homebuilding slows. Across the scenario period, older age demographics and expected retirements should contribute to lower levels of unemployment with generally balanced labour market conditions, even during periods of moderate employment declines.

NON-RESIDENTIAL SECTOR

Significant growth is still expected in Eastern Ontario. Continued diversification of Ottawa's public-sector base should produce a steady rise in the construction of commercial and industrial buildings, while phase two of the Ottawa LRT project is expected
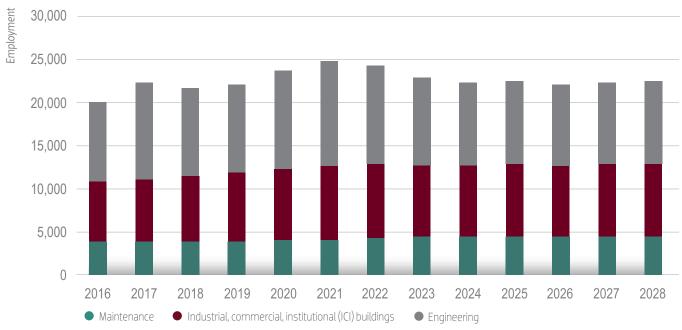
Figure 4: Non–residential construction employment growth outlook, Eastern Ontario

Source: Statistics Canada, BuildForce Canada

to maintain labour demand for a selected group of trades and occupations through 2021.

The construction of institutional and government buildings continues to be the dominant source of non-residential labour demand in the region, but as the private sector continues to expand, construction in both the commercial and industrial sectors makes significant contributions.

Employment declines between 2021 and 2024, but returns to more moderate growth over the latter half of the scenario period, leaving non-residential employment relatively unchanged at the end of the decade.

Figure 4 shows the employment trends by sector for non-residential construction in Eastern Ontario.

NON–RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

For Eastern Ontario, non-residential rankings are reported for 28 of the 34 trades and occupations covered by the BuildForce LMI system, as shown in Table 7. Construction labour markets tighten significantly in 2020 and 2021, coinciding with peak requirements for engineering projects. The completion of major transportation projects should weaken labour market conditions temporarily between 2022 and 2024 for selected trades and occupations. Continued growth in ICI building construction is expected to contribute to sustaining generally balanced market conditions over the latter half of the scenario period.

NON-RESIDENTIAL HIGHLIGHTS, EASTERN ONTARIO

- Employment related to engineering construction increases by 18% to peak levels in 2021 following the anticipated timing of phase two of the Ottawa LRT project.

- Labour requirements related to the construction of ICI buildings are expected to rise steadily across the decade adding more than 800 jobs – an 11% increase from the 2018 starting point. Key projects include the revitalization of the Parliamentary precinct and the Chalk River Laboratories.

- Total non-residential employment rises by 900 jobs (+12%) over the scenario period.

Table 7: Non-residential market rankings, Eastern Ontario

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bricklayers	4	3	3	3	3	3	3	3	3	3	3
Carpenters	3	4	5	5	2	2	3	3	3	3	3
Concrete finishers	2	4	5	5	2	2	3	3	3	3	3
Construction estimators	3	3	4	3	3	3	2	3	3	3	3
Construction managers	3	3	4	4	3	2	2	3	3	3	3
Construction millwrights and industrial mechanics	3	3	4	4	4	2	2	3	3	3	3
Contractors and supervisors	3	3	4	4	3	3	3	3	3	3	3
Crane operators	3	3	4	4	2	2	2	3	3	3	3
Electricians	3	3	4	3	4	2	3	3	3	3	3
Elevator constructors and mechanics	4	4	4	4	3	3	3	3	3	3	3
Floor covering installers	4	4	4	4	3	3	3	3	3	3	3
Gasfitters	4	4	4	3	3	3	3	3	3	3	3
Glaziers	4	4	4	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	3	3	3	3	3	3	3	3	3	3
Heavy-duty equipment mechanics	3	3	3	3	3	3	3	3	3	3	3
Insulators	4	3	3	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	2	4	5	5	2	2	2	3	3	3	3
Painters and decorators (except interior decorators)	4	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	3	4	3	3	3	2	3	3	3	3
Plumbers	4	4	4	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	4	4	4	3	3	3	3	3	3	3
Residential and commercial installers and servicers	4	4	4	3	3	3	3	3	3	3	3
Roofers and shinglers	4	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	4	4	3	3	3	3	3	3	3	3
Steamfitters, pipefitters, and sprinkler system installers	2	3	4	4	4	2	3	3	3	3	3
Trades helpers and labourers	2	3	4	4	3	2	2	3	3	3	3
Truck drivers	3	3	3	3	3	3	3	3	3	3	3
Welders and related machine operators	3	3	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

GREATER TORONTO AREA (GTA)

The GTA[6] construction market continues to experience persistent labour challenges due to record low unemployment following four consecutive years of broad-based growth. A further slowing in new low-rise housing construction is expected to reduce overall employment in 2019 from the record levels in 2018. A significant rise is anticipated in non-residential construction, driven by major projects that sustain recruiting challenges to the expected peak in 2020. The largest near-term increases are for trades and occupations concentrated in engineering construction (nuclear refurbishment and transit systems) with specialized skills and qualifications.

The 2019 outlook scenario for the GTA projects that overall construction employment will be sustained at high levels over the decade. Increases in non-residential labour demand, driven by continued investment in public transportation, other infrastructure, and ICI building construction offset modest declines in the construction of new housing.

Maintaining labour force capacity to sustain construction activity at record levels, while grappling with the anticipated retirement of more than 40,500 workers – nearly one quarter (-23%) of the current labour force – will maintain pressure on recruitment and training requirements across the scenario period.
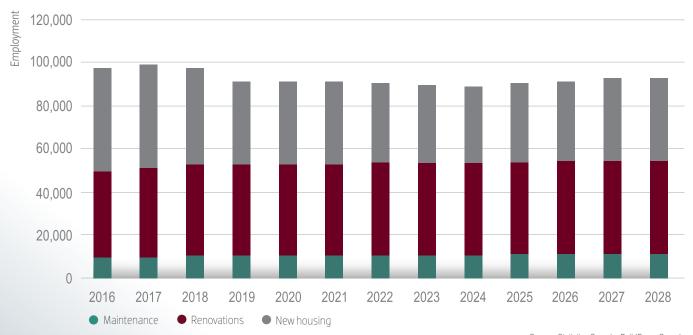
RESIDENTIAL SECTOR

Housing starts are expected to recede below 40,000 units for the first time in four years due to continued significant declines in the low-rise and single-detached market. Population growth sustains overall starts near current levels, but the continued shift from low-rise to high-rise structures results in a downward trend in residential employment over the next five years.

Residential starts increased in 2017, driven by continued demand for high-rise apartments and condos and an acceleration in low-rise housing starts. A further increase in high-rise starts and a spillover of activity into 2018 maintained tight labour market conditions for many trades and occupations in the region over the year. The anticipated decline in low-rise construction is expected to lower employment requirements for some trades, but demand for trades concentrated in high-rise apartment and condo construction is expected to be sustained near current levels.

Figure 5 shows the employment trends by sector for residential construction in the GTA.

Figure 5: Residential construction employment growth outlook, Greater Toronto Area

Source: Statistics Canada, BuildForce Canada

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[6] The **Greater Toronto Area** includes the municipalities of Ajax, Aurora, Bradford West Gwillimbury, Brampton, Brock, Caledon, Clarington, East Gwillimbury, Georgina, Georgina Island, Halton Hills, King, Markham, Milton, Mississauga, Newmarket, Oakville, Oshawa, Pickering, Richmond Hill, Scugog, Toronto, Uxbridge, Vaughan, Whitby and Whitchurch-Stouffville.

Table 8: Residential market rankings, Greater Toronto Area

TRADES AND OCCUPATIONS – RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bricklayers	3	2	3	3	3	3	3	3	3	3	3
Carpenters	3	2	3	3	3	3	3	3	3	3	3
Concrete finishers	3	2	3	3	3	3	3	3	3	3	3
Construction estimators	3	2	3	3	3	3	3	3	3	3	3
Construction managers	3	2	3	3	3	2	3	3	4	4	3
Contractors and supervisors	4	2	3	3	3	3	3	3	3	3	3
Crane operators	5	4	3	3	3	3	3	3	3	3	3
Electricians	4	3	3	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	5	4	3	3	3	3	3	3	3	3	3
Floor covering installers	4	3	3	3	3	3	3	3	3	3	3
Gasfitters	3	2	3	3	3	3	3	3	3	3	3
Glaziers	4	4	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	2	3	3	3	3	3	3	3	3	3
Homebuilding and renovation managers	4	3	3	3	3	3	3	3	3	3	3
Insulators	3	2	3	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	4	4	3	3	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	2	3	3	3	3	3	3	3	3	3
Plumbers	4	3	3	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	3	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	2	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	4	2	3	3	3	3	3	3	3	3	3
Tilesetters	4	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	2	2	3	3	3	3	3	3	3	3	3
Truck drivers	3	2	3	3	3	3	3	3	3	3	3
Welders and related machine operators	4	3	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

RESIDENTIAL HIGHLIGHTS, GREATER TORONTO AREA

- Housing starts are expected to recede to 38,000 units before recovering to 42,000 by 2028.

- Rising interest rates and affordability constrains growth in renovations, but related employment remains stable at relatively high levels.

- Overall employment declines by 6,800 jobs (-7%) over the next five years, before recovering between 2024 and 2028.
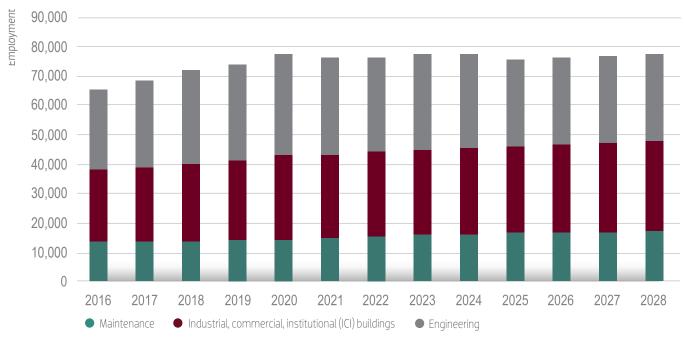
Figure 6: Non–residential construction employment growth outlook, Greater Toronto Area

● Maintenance ● Industrial, commercial, institutional (ICI) buildings ● Engineering

Source: Statistics Canada, BuildForce Canada

RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

For the GTA, residential rankings are reported for 27 of the 34 trades and occupations covered by the BuildForce LMI system, as shown in Table 8. The rise in both new housing and renovation activity tightened labour market conditions for most residential trades and occupations in 2018. The overlap of high-rise project starts and those already under construction maintains pressure for several trades and occupations, while markets return to balanced conditions for others. Anticipated declines in the low-rise market loosen conditions for several trades in 2019. Markets return to balance in 2020, but recruiting and training workers will remain a challenge for the industry to keep pace with even moderate rates of growth.

NON–RESIDENTIAL SECTOR

The non-residential sector continues to grapple with labour market challenges as major project demand requirements rise to a peak in 2020. Past the peak, employment requirements are sustained at high levels driven by rising levels of infrastructure, nuclear refurbishment work to 2025, and ICI building construction required to support moderate population growth.

The timing of labour requirements for major engineering projects, which include the Gardiner expressway rehabilitation, Darlington nuclear refurbishment, and Eglinton Crosstown, Finch, and Hurontario LRTs, adds 5,300 non-residential jobs between 2019 and 2020 – an 8% increase over two years.

Labour requirements for the construction of ICI buildings follow steady population growth and the recent residential construction expansion, contributing 3,600 new non-residential jobs over the decade.

Figure 6 shows the employment trends by sector for non-residential construction in the GTA.

NON–RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

For the GTA, non-residential rankings are reported for 31 of the 34 trades and occupations covered by the BuildForce LMI system, as shown in Table 9. Labour market conditions are expected to remain tight over the near term as the labour force struggles to keep up with persistent employment increases. Large numbers of workers have been drawn in to meet local demands, but mobility is potentially impeded by higher living and commuting costs in the GTA.

Trades and occupations with specialized skills and experience will continue to be required in large numbers to meet nuclear refurbishment labour demands, although there is a modest decline in 2019. Labour market challenges may be exacerbated as a second nuclear refurbishment project in Southwestern Ontario starts in 2020 and continues across the scenario period.

Table 9: Non–residential market rankings, Greater Toronto Area

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Boilermakers	4	3	5	4	3	4	3	2	3	3	4
Bricklayers	4	4	4	3	3	3	3	3	3	3	3
Carpenters	5	4	4	3	3	3	3	3	3	3	3
Concrete finishers	4	3	3	2	2	3	3	3	3	3	3
Construction estimators	4	3	4	3	3	3	3	2	3	3	4
Construction managers	4	4	4	3	3	3	3	3	3	3	4
Construction millwrights and industrial mechanics	4	3	4	4	3	3	3	2	3	3	3
Contractors and supervisors	4	4	4	3	3	3	3	3	3	3	3
Crane operators	5	4	3	3	3	3	3	3	3	3	3
Electrical power line and cable workers	4	4	4	4	3	4	3	2	3	3	3
Electricians	4	4	5	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	4	4	4	3	3	3	3	3	3	3	3
Floor covering installers	4	4	4	3	3	3	3	3	3	3	3
Gasfitters	4	4	4	3	3	3	3	3	3	3	3
Glaziers	4	4	4	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	4	3	4	3	3	3	3	2	3	3	3
Heavy–duty equipment mechanics	4	3	4	3	3	3	3	3	3	3	3
Insulators	4	3	4	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	4	4	3	2	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	4	4	4	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	4	4	4	3	3	3	3	3	3	3	3
Plumbers	4	4	4	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	4	4	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	4	4	3	3	3	3	3	3	3	3	3
Roofers and shinglers	4	4	4	3	3	3	3	3	3	3	3
Sheet metal workers	4	4	4	3	3	3	3	3	3	3	3
Steamfitters, pipefitters, and sprinkler system installers	4	5	5	3	3	3	3	3	3	3	3
Tilesetters	4	4	4	3	3	3	3	3	3	3	3
Trades helpers and labourers	4	4	4	3	3	3	3	3	3	3	3
Truck drivers	4	3	4	3	3	3	3	2	3	3	3
Welders and related machine operators	4	3	4	3	3	3	3	3	3	3	4

Source: BuildForce Canada

NON-RESIDENTIAL HIGHLIGHTS, GREATER TORONTO AREA

- Overall employment in the non-residential sector rises by 5,800 jobs (+8%) over the decade, but growth is mostly concentrated between 2018 and 2020.

- Low levels of unemployment and an aging workforce maintain recruitment challenges even during periods of slower growth later in the scenario period.
- Heavy industrial activity, including a nuclear refurbishment project, should sustain engineering employment throughout the decade. Approximately 3,000 workers should be released between 2023 and 2026.

NORTHERN ONTARIO

Major mining and electric utility projects in Ontario's Northern region[7] raise local employment to a peak in 2019, which is then sustained to 2022. The timing of mining and related expansion projects and planned transmission line projects are key drivers of labour demand, but other smaller infrastructure projects and a relatively stable residential sector contribute to market challenges for most trades and occupations in the region.

Renewed population growth, fuelled by increased migration, is expected to support modest growth in new housing and ICI building construction. Rising related employment requirements are expected to absorb most available workers once major projects are completed.

The uncertain commodity price outlook and road access has delayed final investment decisions for some proposed resource development projects (e.g., Ring of Fire). Any significant new investments would likely exceed the available supply of local industry labour, requiring additional recruitment and training from outside the industry and supplemented by the recruitment of

experienced industry workers from other regions of the province or from outside the provincial labour force.
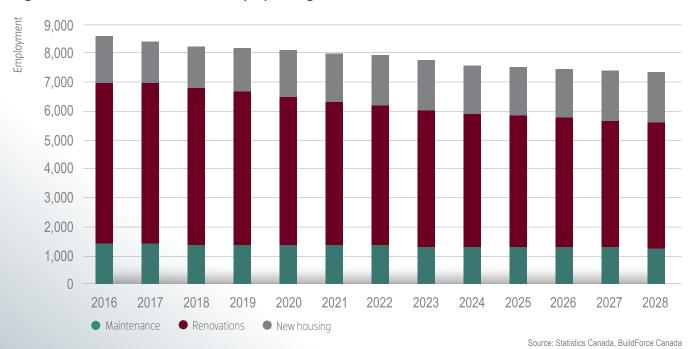
RESIDENTIAL SECTOR

Labour demand in residential construction, which is dominated by renovation activity, is projected to continue a downward trend over the decade. An anticipated rise in migration to the North is expected to lift housing starts from 900 to 1,200 units between 2018 and 2021, while renovation activity is projected to continue softening due to falling household disposable income and rising interest rates.

Employment related to new homebuilding is expected to increase by almost 500 jobs to 2021, equal to anticipated declines in renovation activity. Steady levels of employment are expected to contribute to maintaining balanced labour markets for most trades, but older age demographics will result in significant hiring requirements to meet replacement (age-related attrition) demands.

Figure 7 shows the employment trends by sector for residential construction in Northern Ontario.

Figure 7: Residential construction employment growth outlook, Northern Ontario

● Maintenance ● Renovations ● New housing

[7] **Northern Ontario** includes the economic regions of the Northeast and Northwest as defined by Statistics Canada, including the Census Metropolitan Areas (CMAs) of Thunder Bay and Sudbury. Cities include Sault Ste. Marie, Timmins, Kirkland Lake, Dryden, Kenora, and Fort Frances.

RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

For Northern Ontario, residential rankings are reported for 15 of the 34 trades and occupations covered by the BuildForce LMI system, as shown in Table 10. Over the near term, residential labour market conditions are generally balanced, signalled by a rank of 3. A further rise in new homebuilding expected between 2019 and 2022 is likely to result in recruitment challenges for some trades and occupations more concentrated in new construction.

Older age demographics and expected retirements contribute to lower natural rates of unemployment[8], maintaining balanced labour market conditions over the latter half of the scenario period as activity in new housing slows.

NON-RESIDENTIAL SECTOR

Engineering construction, which accounts for 45% of construction investment in the North, is expected to crest in 2019 following an 80% increase since 2013. Moderate growth in labour requirements related to ICI building construction is expected to contribute to sustaining overall non-residential labour demand near current levels over the latter half of the scenario period.

The planned start of the Wataynikaneyap and East-West link transmission projects, in addition to other mining and industrial expansion projects already underway, should raise overall non-residential construction employment to a peak of 15,800 workers in 2019 – up 5% compared to 2018.

Table 10: Residential market rankings, Northern Ontario

TRADES AND OCCUPATIONS – RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bricklayers	3	3	3	3	3	3	3	3	3	3	3
Carpenters	3	3	3	3	3	3	3	3	3	3	3
Construction estimators	3	3	3	3	3	3	3	3	3	3	3
Construction managers	3	4	4	4	4	3	3	3	3	3	3
Contractors and supervisors	3	3	3	3	3	3	3	3	3	3	3
Electricians	3	3	3	3	3	3	3	3	3	3	3
Floor covering installers	3	3	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	3	3	3	3	3	3	3	3	3	3
Homebuilding and renovation managers	4	4	3	3	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	3	3	3	3	3	3	3	3	3	3
Plumbers	3	3	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	3	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Trades helpers and labourers	3	3	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

RESIDENTIAL HIGHLIGHTS, NORTHERN ONTARIO

- Overall residential employment declines by 950 (-11%) over the coming decade.
- Housing starts rise to 1,200 units by 2021.
- Renovation and maintenance work accounted for 8 in 10 residential jobs in 2018

[8] **Natural unemployment rate** or normal unemployment refers to the unemployment that results from workers moving from one job to another. This unemployment rate exists because some workers are in-between jobs, some workers' skills do not align with employers' needs, or because there is a mismatch in the wage expectations between employers and workers.
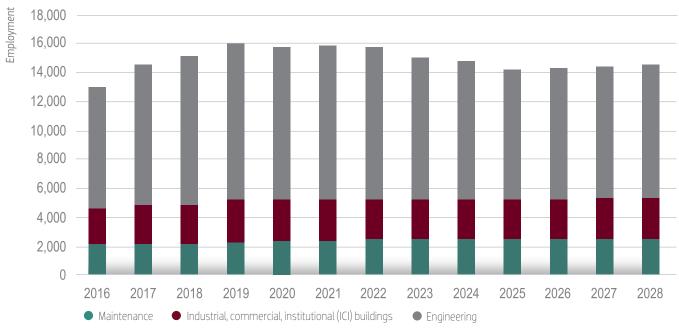
Figure 8: Non–residential construction employment growth outlook, Northern Ontario

Source: Statistics Canada, BuildForce Canada

Overall non-residential employment requirements are expected to decline by a modest 600 jobs once known projects are completed by 2028.

Figure 8 shows the employment trends by sector for non-residential construction in Northern Ontario.

NON–RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

For Northern Ontario, non-residential rankings are reported for 22 of the 34 trades and occupations covered by the BuildForce LMI system, as shown in Table 11. The start of new mining expansion and utility projects maintained pressure on labour markets in 2018 and transmission line projects tighten markets further for selected

trades in 2019. Completion of major projects currently underway will release workers, temporarily loosening conditions for selected trades and occupations by 2023. The timing of major resource development projects can have a significant impact on Northern Ontario's relatively small labour market. Any significant new investments could put a considerable strain on the local labour force. In addition, an older labour force and expected retirements add to recruiting challenges, even during periods of slower growth.

NON-RESIDENTIAL HIGHLIGHTS, NORTHERN ONTARIO

- Overall non-residential employment requirements are expected to decline by a modest 600 jobs over the scenario period.

- Engineering construction investment is expected to crest in 2019, following an 80% increase since 2013.

- Resource development projects underway or proposed add to employment opportunities over the medium term to 2022 and then decline as known projects approach completion.

Table 11: Non–residential market rankings, Northern Ontario

TRADES AND OCCUPATIONS – NON-RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Boilermakers	4	4	3	3	3	3	3	3	3	3	3
Carpenters	4	4	3	3	3	2	3	3	3	3	3
Construction estimators	4	3	2	3	3	2	3	3	3	3	3
Construction managers	4	4	3	4	3	3	3	3	3	3	3
Construction millwrights and industrial mechanics	4	4	3	3	3	2	3	3	3	3	3
Contractors and supervisors	4	4	3	4	3	2	3	2	3	3	3
Crane Operators	4	5	2	2	3	2	2	2	3	3	3
Electrical power line and cable workers	4	5	3	2	3	2	3	2	3	3	3
Electricians	4	4	3	4	3	2	3	3	3	3	3
Gasfitters	3	5	4	3	3	2	3	3	3	3	3
Heavy equipment operators (except crane)	4	4	3	3	3	2	3	2	3	3	3
Heavy–duty equipment mechanics	4	4	3	3	3	2	3	3	3	3	3
Insulators	3	4	4	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	4	3	2	3	2	2	2	3	3	3
Plumbers	3	4	4	4	3	2	3	3	3	3	3
Refrigeration and air conditioning mechanics	3	5	3	2	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	3	4	4	3	3	2	3	3	3	3	3
Steamfitters, pipefitters, and sprinkler system installers	3	5	4	4	2	2	2	3	3	3	3
Trades helpers and labourers	3	3	3	3	3	2	3	3	3	3	3
Truck drivers	4	4	3	3	3	2	3	2	3	3	3
Welders and related machine operators	4	3	3	3	3	2	3	3	3	3	3

Source: BuildForce Canada

SOUTHWESTERN ONTARIO

Southwestern Ontario[9] is expected to lead the province in construction growth as major project and nuclear refurbishment requirements ramp up in 2019 and 2020.

The start of work on the new Nova Chemicals plant and the long-awaited Gordie Howe International Bridge contributed to a further tightening of labour markets in 2018. The anticipated start of long-term nuclear refurbishment work at Bruce Power and intensification of other project demands are expected to increase non-residential employment by a further 4,100 jobs (+19%) by 2020. Many industrial trades, including boilermakers, carpenters, ironworkers, insulators, pipefitters, and welders are expected to experience double-digit employment gains. Adding to recruiting challenges is the scheduled industrial shutdown and turnaround maintenance work in Sarnia that will compete for the same trades and occupations during peak periods in the spring within the year.

The significant and long-term labour requirements related to the Bruce Power refurbishment, alongside modest growth in the construction of ICI (industrial, commercial, institutional) buildings sustain employment well above historically high levels over the entire scenario period. Overall non-residential employment increases by 5,900 jobs (+27%) over the decade.

Depending on skills and experience, there is some potential for non-residential labour requirements to be partly met through mobility from the residential sector. Employment in the residential sector is expected to recede by 3,300 jobs by 2022 as new homebuilding continues to slow.

Overall construction employment is expected to rise by 3,900 jobs over the scenario period. In addition to rising workforce demands, the local industry must contend with the anticipated retirement of more than 12,100 workers, bringing the total hiring requirements to nearly 16,300 workers over the coming decade. The industry may be able to recruit 11,400 first-time new entrants aged 30 and younger from the local population, leaving a recruitment gap of 4,900 workers that will need to be attracted to the local construction labour force.

RESIDENTIAL SECTOR

Housing starts doubled in two years, to reach a historical high in 2017. The growth was driven in part by strong population growth and a 40% increase in household formations. By 2022, starts are expected to recede to 6,000 units from the 8,000 in 2017, before cycling back up to 2018 levels by 2027. The outlook suggests an anticipated loss of 3,300 residential jobs to 2022, followed by a recovery of 1,300 jobs between 2023 and 2028.

Aging workforce demographics, steady levels of renovation activity, and the potential for some workers to be drawn to the non-residential sector as activity increases there, translate into generally balanced labour market conditions for most trades and occupations in the residential sector over the scenario period.

Figure 9 shows the employment trends by sector for residential construction in Southwestern Ontario.
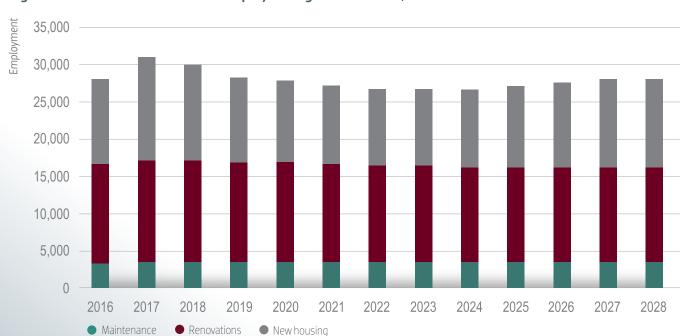
Figure 9: Residential construction employment growth outlook, Southwestern Ontario

Source: Statistics Canada, BuildForce Canada

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[9] **Southwestern Ontario** includes the economic regions of London, Windsor-Sarnia, and Stratford-Bruce Peninsula as defined by Statistics Canada, including the Census Metropolitan Areas (CMAs) of London and Windsor. Cities include Chatham, Ingersoll, Sarnia, Stratford, Goderich, and Owen Sound.

RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

For Southwestern Ontario, residential rankings are reported for 22 of the 34 trades and occupations covered by the BuildForce LMI system. Table 12 shows that following strong demands related to the construction of new housing in 2017, labour market conditions for trades and occupations involved in new construction returned to balance in 2018 as housing starts receded.

Over the scenario period, aging workforce demographics and rising labour demands related to renovation work contribute to maintaining balanced labour market conditions, even at lower levels of employment.

Table 12: Residential market rankings, Southwestern Ontario

TRADES AND OCCUPATIONS – RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bricklayers	3	2	3	3	3	3	3	3	3	3	3
Carpenters	3	2	3	3	3	3	3	3	3	3	3
Concrete finishers	3	2	3	3	3	3	3	3	3	3	3
Construction estimators	3	2	3	3	3	3	3	3	3	3	3
Construction managers	3	2	3	3	3	3	3	3	3	3	3
Contractors and supervisors	3	3	3	3	3	3	3	3	3	3	3
Electricians	3	2	3	3	3	3	3	3	3	3	3
Floor covering installers	3	3	3	3	3	3	3	3	3	3	3
Gasfitters	3	2	3	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	2	3	3	3	3	3	3	3	3	3
Homebuilding and renovation managers	4	3	3	3	3	3	3	3	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	2	3	3	3	3	3	3	3	3	3
Plumbers	3	2	3	3	3	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	3	2	3	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	3	2	3	3	3	3	3	3	3	3	3
Roofers and shinglers	3	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	3	2	3	3	3	3	3	3	3	3	3
Tilesetters	3	2	3	2	3	3	3	3	3	3	3
Trades helpers and labourers	3	2	3	3	3	3	3	3	3	3	3
Truck drivers	3	2	3	3	3	3	3	3	3	3	3
Welders and related machine operators	3	2	3	3	3	3	3	3	3	3	3

Source: BuildForce Canada

RESIDENTIAL HIGHLIGHTS, SOUTHWESTERN ONTARIO

- Housing starts reached a historically high level in 2017, surpassing 8,000 units – close to doubling in two years. Starts are expected to recede to 6,000 units by 2022, before cycling back up to 2018 levels by 2027.

- An anticipated loss of 3,300 residential jobs to 2022 is followed by a recovery of 1,300 between 2023 and 2028.

- The aging workforce and renovation activities are expected to maintain balanced labour market conditions for most trades and occupations over the scenario period.

NON–RESIDENTIAL SECTOR

Non-residential investment is set to expand by 35% over the next two years and be sustained at that level for the remainder of the decade.

The construction outlook is dominated by the Nova Chemicals, Gordie Howe bridge, and Bruce nuclear refurbishment projects. The overlap in project timing is likely to increase recruiting challenges for many trades and occupations. Overall non-residential employment requirements are expected to rise by 4,100 jobs (+18%) by 2020.

Although rising institutional, commercial, and maintenance labour demands are eclipsed by the big major projects, they are not insignificant. Commercial investment is expected to expand by 32% and institutional by 25% over the next 10 years, adding 1,200 related jobs.

Overall employment is projected to increase by 5,900 jobs by 2028 – up 27% compared to the 2018 starting point.

Figure 10 shows the employment trends by sector for non-residential construction in Southwestern Ontario.

NON–RESIDENTIAL RANKINGS, RISKS, AND MOBILITY

For Southwestern Ontario, non-residential rankings are reported for 28 of the 34 trades and occupations covered by the BuildForce LMI system, as shown in Table 13. Labour market conditions were mixed in 2018 with some labour markets already experiencing pressures due to the start on the Nova Chemicals plant and other industrial projects. The acceleration of demands in 2019 tightens markets for many trades and occupations. Bruce Power nuclear refurbishment ramps up in 2020, just as other projects are peaking, increasing demand well above the regional pool of workers. Conditions are broadly balanced over the latter half of the scenario period, but recruitment challenges are likely to persist for trades with older age demographics and specialised skills, especially for the ongoing nuclear refurbishment work.

Figure 10: Non–residential construction employment growth outlook, Southwestern Ontario

Source: Statistics Canada, BuildForce Canada

NON-RESIDENTIAL HIGHLIGHTS, SOUTHWESTERN ONTARIO

- Non-residential investment is set to expand by 35% over the next two years and will be sustained at a very high level for the remainder of the decade.
- 4,100 additional non-residential workers are required by 2020 – an 18% increase over two years.
- The start of a major nuclear refurbishment project in 2020 sustains demands across the remainder of the scenario period for a selected group of trades and occupations.
- Overall employment is projected to increase by 5,900 jobs by 2028 – up 27% compared to the 2018 starting point.

Table 13: Non-residential market rankings, Southwestern Ontario

TRADES AND OCCUPATIONS — NON-RESIDENTIAL	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Boilermakers	4	4	5	4	3	3	4	4	3	3	3
Carpenters	4	4	4	3	3	3	3	3	3	3	3
Concrete finishers	4	4	3	3	3	3	3	3	3	3	3
Construction estimators	4	4	4	4	2	3	3	3	3	3	3
Construction managers	4	4	4	3	3	3	3	3	3	3	3
Construction millwrights and industrial mechanics	3	3	5	5	3	3	4	3	3	3	3
Contractors and supervisors	3	4	4	4	3	3	3	3	3	3	3
Crane operators	3	3	4	3	3	3	3	3	3	3	3
Electrical power line and cable workers	3	3	3	4	4	3	3	3	3	3	3
Electricians	3	3	4	3	3	3	3	3	3	3	3
Elevator constructors and mechanics	4	4	3	3	3	3	3	3	3	3	3
Floor covering installers	4	4	4	3	3	3	3	3	3	3	3
Gasfitters	3	4	4	4	4	3	3	3	3	3	3
Glaziers	4	3	4	3	3	3	3	3	3	3	3
Heavy equipment operators (except crane)	3	3	3	3	3	3	3	2	3	3	3
Heavy-duty equipment mechanics	4	4	4	4	3	3	3	3	3	3	3
Insulators	3	4	4	3	3	3	3	3	3	3	3
Ironworkers and structural metal fabricators	3	5	5	2	3	5	2	4	3	3	3
Painters and decorators (except interior decorators)	3	3	3	3	3	3	3	3	3	3	3
Plasterers, drywall installers and finishers, and lathers	3	3	3	3	3	3	3	3	3	3	3
Plumbers	3	3	4	4	4	3	3	3	3	3	3
Refrigeration and air conditioning mechanics	4	4	4	3	3	3	3	3	3	3	3
Residential and commercial installers and servicers	4	3	3	3	3	3	3	3	3	3	3
Sheet metal workers	3	3	4	3	3	3	3	3	3	3	3
Steamfitters, pipefitters, and sprinkler system installers	4	4	5	3	2	3	3	3	3	3	3
Trades helpers and labourers	3	4	3	3	3	3	3	3	3	3	3
Truck drivers	3	4	3	3	3	3	3	2	3	3	3
Welders and related machine operators	3	3	5	4	3	3	3	3	3	3	3

Source: BuildForce Canada

BUILDING A SUSTAINABLE LABOUR FORCE

Over the next 10 years, 91,100 workers are estimated to retire from Ontario's construction labour force, which will strain labour markets, as this reflects a significant loss of talent. Industry must remain proactive to replenish the workers expected to retire, as the province's population is rapidly aging.
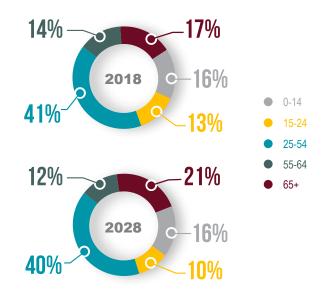
Although the Greater Toronto Region has one the youngest populations in the country, Ontario has seen a steady increase in the share of the population 65 years and older. Over the next 10 years, the share of the population in the older age bracket (65 years and over) is expected to increase, and at the same time, the share of the population at prime working age (25-54 years old) is expected to decline (see Figure 11). Additionally, the share of the population that is potentially available to enter the labour force (15-24 years old) is expected to decline. These demographic shifts have the potential to tighten labour markets, even under slower growth conditions, as all industries will be competing for talented youth.

As a considerable share of the population moves into the older age bracket, the labour force participation rate (percent of the population 15 years and older in the labour force) is expected to fall steadily.

Ontario's aging population, combined with slowing in-migration, is anticipated to translate into weaker population growth compared to the past three years. Population growth was operating at an average of 1% per year for the 13 years preceding 2016, but strong increases in immigration between 2016 and 2018 drove population growth to levels not experienced since 2001. Over the coming decade, population growth is expected to recede steadily to 2025 and return to more normal levels near 1% per year. Ontario's components of population growth are shown in Figure 12.

Figure 11: Population age distribution, Ontario

Source: BuildForce Canada

Figure 12: Sources of population growth (%), Ontario

Source: Statistics Canada, BuildForce Canada (2019–2028)

Based on historical trends, Ontario's construction industry is expected to draw in an estimated 77,800 first-time new entrants aged 30 and younger from the local population over the next decade. In the scenario period, the pace of retirements exceeds the number of youth coming into construction, forcing the industry to look to other industries, other provinces, and other countries for additional new workers to augment the available pool of local new entrants.

APPRENTICESHIP

More than 54,000 apprentices registered in the 15 largest construction programs[10] in Ontario between 2012 and 2018[11]. Completions totalled 35,500 over the same period. Apprenticeship data from Statistics Canada's Registered Apprenticeship Information System (RAIS) shows annual new registrations increased by 7% from 2012 to 2018, a slightly slower pace compared to construction employment, which increased by 10% over the same period. New registrations peaked in 2014 reaching 8,400 before declining to 7,647 in 2016, and have risen gradually since. BuildForce Canada is working to better track apprenticeship training information to provide data on industry trends and training needs to ensure there are sufficient numbers of apprentices and newly certified journeypersons to sustain a skilled workforce over the long term.

UNDERREPRESENTED GROUPS OF WORKERS

Building a sustainable workforce will require the construction and maintenance industry to increase recruitment from groups traditionally underrepresented in the current construction labour force, including women, Indigenous Canadians, and new Canadians.

In 2018, nearly 3.5 million women were employed in Ontario, representing 48% of the province's total workforce. The province's healthcare and social assistance, educational services and retail trade industries are key employers of women, representing nearly half (1.5 million) of all female employment. The construction industry employed approximately 1.9% (66,100) of Ontarian women.

Ontario's construction workforce is made up of approximately 13% women, of which about 31% work directly on construction projects, while the remaining 69% work primarily in administrative and management-related occupations. This translates into women representing 3.9% of employment in direct trades and occupations.

Tradeswomen in Ontario are concentrated in the residential sector, with more than two thirds (13,600) of women employed in the sector. The non-residential sector employs 6,900 women, with a roughly even split between engineering and ICI building construction, as shown in Figure 13.

Recent growth in Ontario's construction industry was significant and required industry to broaden its requirement to include workers traditionally underrepresented in the sector, driving a rise in female employment and representation in the industry over the past two years. Based on historical in- and out-flows of women to the construction industry, female employment and representation in the industry is expected to decline over the near term due to moderating residential construction activity, as shown in Figure 14. After 2020, steady gains in the construction of ICI buildings

Figure 13: Breakdown of female construction employment (2018), Ontario

NEW HOUSING
6,700
33%

ICI* BUILDINGS
2,300
11%

RESIDENTIAL MAINTENANCE
1,600
8%

NON-RESIDENTIAL MAINTENANCE
1,100
6%

RENOVATIONS
5,300
26%

ENGINEERING
3,500
17%

* industrial, commercial, institutional

Source: BuildForce Canada calculations based on Statistics Canada's Labour Force Survey (LFS) and 2016 Census of the Population.

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[10] Programs include Sheet Metal Worker, Ironworker (Structural/Ornamental), Welder, Construction Electrician, Powerline Technician, Steamfitter/Pipefitter, Sprinkler System Installer, Carpenter, Bricklayer, Lather (Interior Systems Mechanic), Industrial Mechanic (Millwright), Refrigeration and Air Conditioning Mechanic, Mobile Crane Operator, Plumber, and Residential Air Conditioning Systems Mechanic.

[11] Statistics Canada's apprenticeship data is only available to 2016. BuildForce Canada estimated the 2017 and 2018 values.
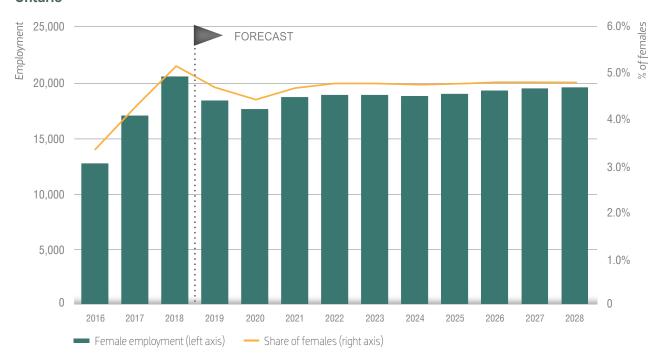
Figure 14: Female construction employment and share of total direct trades and occupations*, Ontario

Female employment (left axis) — *Share of females (right axis)*

* **Direct trades and occupations** refers to the 34 trades and occupations tracked by BuildForce Canada, which excludes administrative–type occupations.

Source: BuildForce Canada calculations based on Statistics Canada's Labour Force Survey (LFS) and 2016 Census of the Population.

and a recovery in new homebuilding will drive modest gains in female employment over the remainder of the decade. Female representation is expected to remain relatively stable post 2020, as the modest pace of growth suggests normal recruitment patterns over the long term.

Canada's Indigenous population is another underrepresented group that presents opportunities for Ontario's construction industry, as more than a quarter of all Indigenous people reside in the province. The Indigenous population is the fastest growing in Canada and they have a higher propensity to choose the construction industry

as a career choice. In 2016, an estimated 7.6% of non-Indigenous Canadians were employed in the construction industry, compared to 9.6% for the Indigenous population.

Approximately 2.7% of Ontario's construction workforce is made up of Indigenous Canadians, of which about 80% work directly on construction projects, while the remaining 20% work primarily in administrative and management-related occupations. The Indigenous population is also more likely to work in heavy-industrial construction, as nearly half of all Indigenous Canadians work in that sector.

10-YEAR AVERAGE

1.1%
POPULATION GROWTH

161,400
BIRTHS

122,800
DEATHS

132,500
NET MIGRATION

BY 2028

42
AVERAGE AGE OF CONSTRUCTION WORKFORCE

22%
PERCENT OF CURRENT LABOUR FORCE LOST TO RETIREMENT

Lastly, building a sustainable workforce may require Ontario's construction industry to count on new Canadians (immigrants). Over the coming decade, the province is expected to welcome an average of 131,000 newcomers every year, making the immigrant population a key driver of labour force growth.

Ontario's construction workforce is made up of approximately 26% new Canadians. Historically, a significant share of landed immigrants has been Europeans, who have a higher propensity to choose the construction industry. The new wave of immigration primarily includes workers from Asia (China and India), whose citizens may have a lower inclination toward construction trades and occupations.

CONCLUSIONS AND IMPLICATIONS

Ontario's construction industry is experiencing a divergence between residential and non-residential market cycles, facilitating potential mobility to meet peak labour requirements for major projects across regions.

Non-residential construction continues on a steady upward trajectory, with investment expected to peak in 2020, driven by several transportation (public transit, roads, highways, and bridges), utility (including nuclear refurbishment), and industrial projects. Beyond 2020, investment is expected to decline modestly from the peak, though employment is anticipated to remain well above historical levels.

In the residential sector, activity is slowing after reaching record levels in 2017 and 2018. Increasing levels of immigration remain a strong driver of population growth. Changes to mortgage eligibility rules, further possible increases in interest rates, and other factors affecting affordability, however, are expected to continue slowing the pace of new low-rise housing construction between 2019 and 2020. Across the scenario period, renovation activity rises steadily, and new homebuilding stabilizes near current historically high levels. While total residential employment is expected to recede moderately, it should remain at near current levels across most regions over the scenario period.

Adding to market challenges is an aging workforce. While the pace of growth slows compared to the recent past, sustaining capacity over the latter half of the scenario period will be made more difficult by the expected retirement of 91,100 workers over the decade. Attracting new workers to the industry will be crucial in meeting long-term needs.

The industry scenario-based approach developed by BuildForce Canada to assess future labour market conditions provides a powerful planning tool for industry, government, and other stakeholders to better track labour market conditions and identify potential pressure points. The anticipated labour market conditions reflect the current industry expectations of population growth and schedules for proposed major projects. Any changes to these assumptions presents risks and potentially alters anticipated market conditions.